

# UNITED STATES AIR FORCE



# OCCUPATIONAL SURVEY REPORT

METEOROLOGICAL AND NAVIGATION SYSTEMS

AFSC 2E1X2 (FORMERLY 304X1)

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OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
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# **PREFACE**

This report presents the results of an Air Force Occupational Survey of the Meteorological and Navigation Systems career ladder, Air Force Specialty Code 2E1X2. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

The survey instrument was developed by Captain Shannon M. Karpel, Inventory Development Specialist, with computer programming support furnished by Mr. Wayne Fruge. Mr. Richard G. Ramos provided administrative support. 2Lt Scott M. Foley, Occupational Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Mr. James B. Keeth, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to AFOMS, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph Air Force Base, Texas 78150-4449 (DSN 487-6623).

RICHARD C. OURAND, JR., Lt Col, USAF Commander Air Force Occupational Measurement Sq JOSEPH S. TARTELL Chief, Occupational Analysis Flight Air Force Occupational Measurement Sq

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## SUMMARY OF RESULTS

- 1. <u>Survey Coverage</u>: The Meteorological and Navigation (MET/NAV) Systems career ladder was surveyed to provide current job and task data for use in updating career ladder documents and training. Survey results are based on responses from 552 respondents, accounting for 68 percent of the total assigned population.
- 2. <u>Specialty Jobs</u>: Eight jobs were identified in the career ladder structure analysis. Four of the jobs are almost totally oriented toward technical task performance. The remaining four jobs are primarily supervisory and management in nature.
- 3. <u>Career Ladder Progression</u>: Skill-level progression for members of this AFSC is typical of most career ladders. Three-skill level personnel spend the vast majority of their job time performing technical tasks involving maintenance of a wide variety of meteorological and navigation equipment. At the 5-skill level, personnel are still heavily involved with MET/NAV equipment maintenance, but begin to become involved with quality control and workcenter supervision. Seven-skill level personnel reflect a shift toward supervisory and management work, although 41 percent are still involved with technical maintenance tasks.
- 4. <u>AFMAN 36-2108 Specialty Description</u>: The 3- and 5-skill level Specialty Descriptions in AFMAN 36-2108 provide a broad and generally accurate description of the technical job of meteorological and navigation systems repair and maintenance functions. However, very little mention is made of the Quality Control job performed by 5-skill level personnel. The 7-skill level description accurately reflects the added supervisory, directing, and inspection functions at that level, as well as the continued performance of technical functions.
- 5. <u>Training Analysis</u>: Overall, the 2E1X2 Specialty Training Standard (STS), dated 1 April 1995, was generally supported by the Occupational Survey Report (OSR) data. Subject-matter experts, however, should carefully review the STS for possible fine-tuning of content and proficiency codes, since this is a very diverse career ladder and personnel work on many different systems and pieces of equipment. Plans of Instruction (POI) for the 2E1X2 ABR course are generally supported by survey data, but contains some criterion objectives requiring review due to low percentages of first-term airmen performing tasks being trained.
- 6. <u>Job Satisfaction</u>: In general, job satisfaction among AFSC 2E1X2 personnel is fairly high; however, there was a considerable decrease in the overall job satisfaction after this career ladder was merged in October 1990. Personnel working in the Mobility job have the overall lowest job satisfaction of any jobs identified.
- 7. <u>Implications</u>: The current AFSC 2E1X2 career ladder structure reflects a great deal of diversity within the career ladder. Most of this is the result of the wide variety of meteorological and navigation equipment being maintained by career ladder incumbents. Four jobs were identified which involved equipment maintenance. The other four jobs identified were mainly support in nature. Overall job progression is normal. AFMAN 36-2108 Specialty Descriptions

broadly describe the maintenance jobs and tasks being performed, but do not cover many of the support jobs and tasks. Job satisfaction is fairly high among career ladder incumbents. Both the STS and the POI are generally supported by OSR data, but should be given a thorough review due to the wide diversity of equipment involved.

# OCCUPATIONAL SURVEY REPORT (OSR) METEOROLOGICAL AND NAVIGATION SYSTEMS CAREER LADDER (AFSC 2E1X2)

# INTRODUCTION

This is a report of an occupational survey of the Meteorological and Navigation (MET/NAV) Systems career ladder completed by the Air Force Occupational Measurement Squadron (AFOMS). These data will be used to evaluate the AFMAN 36-2108 Specialty Description and training documents. This is the first survey of the newly merged AFSC 2E1X2. The last survey, published in February 1989, was conducted prior to the actual merger of the Weather Equipment (AFSC 302X0) and the Navigation Aids Equipment (AFSC 304X1) career ladders in October 1990.

# **Background**

As described in the AFMAN 36-2108 Specialty Description, dated 31 October 1994, AFSC 2E1X2 members install, relocate, modify, and maintain meteorological and navigation systems, and accomplish flight inspection technicians duties. They assemble, connect, and wire components, assemblies, and antenna systems, perform operational tests, and adjust and align equipment. They also deploy and activate transportable MET/NAV systems. In addition, they maintain meteorological and navigations systems. They use specialized test equipment and software controlled diagnostics to isolate malfunctions; repair mechanical and electrical assemblies and subassemblies; tune, align, and adjust equipment; and complete performance tests and evaluate results to ensure proper system operation. Furthermore, they complete and review maintenance data collection and equipment status reporting forms.

Entry into the career ladder currently requires an Armed Services Vocational Aptitude Battery score of Electronic 67. The basic resident training course for this career ladder is located at Keesler AFB in Biloxi, MS. Airmen entering this career ladder must first complete the Electronic Principles course and then enter the basic Apprentice Meteorological and Navigation System Specialist course, which is 155 days in length. Students of this course are taught operation, tuning, adjustment, calibrations, alignment, troubleshooting, inspection, and organization maintenance and repair of instrument landing systems (ILS), VHF omnirange (VOR) systems, tactical air navigation (TACAN) systems, and weather equipment (such as cloud height, visibility, temperature-humidity, wind, and pressure sensing).

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## SURVEY METHODOLOGY

# **Inventory Development**

The data collection instrument for this occupational survey was USAF Job Inventory (JI) Air Force Personnel Test 90-2E1-031, dated October 1994. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, pertinent tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 21 subject-matter experts (SMEs) at the technical training location and at the following installations:

| BASE            | REASON FOR VISIT                           |
|-----------------|--|
| Keesler AFB MS  | Resident technical training location       |
| Tinker AFB OK   | Mobility                                   |
| Eglin AFB FL    | AFMC, three runways to maintain, AN/FMQ-12 |
| Randolph AFB TX | Dual Instrument Landing System (ILS)       |

The resulting JI contains a comprehensive listing of 1,255 tasks grouped under 23 duty headings and a background section requesting such information as grade, duty title, organizational level, test equipment used, weather equipment performed maintenance on, navigation aid equipment performed maintenance on, and work area.

## **Survey Administration**

From May through July 1995, Survey Control Monitors at base training units worldwide administered the inventory to eligible AFSC 2E1X2 personnel. Job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in his or her current job. After checking all tasks performed, each member then rated each of these tasks on a 9-point scale, showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount time spent).

To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time spent for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

# Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation across major commands (MAJCOM) and military paygrade groups. All eligible AFSC 2E1X2 personnel were mailed survey booklets. Table 1 reflects the percentage distribution, by MAJCOM, of assigned AFSC 2E1X2 personnel as of March 1995. The 552 respondents in the final sample represent 68 percent of the total assigned personnel and 81 percent of the total personnel surveyed. Table 2 reflects the paygrade distribution for these personnel. The survey sample is considered to be a satisfactory representation of the career ladder population.

TABLE 1

COMMAND DISTRIBUTION OF 2E1X2 PERSONNEL

| COMMAND | PERCENT OF<br>ASSIGNED* | PERCENT OF<br>SAMPLE |
|---------|-------------------------|----------------------|
| AMC     | 12                      | 13                   |
| ACC     | 30                      | 31                   |
| AETC    | 15                      | 15                   |
| AFMC    | 17                      | 15                   |
| PACAF   | 9                       | 11                   |
| USAFE   | 10                      | 7                    |
| OTHER   | 7                       | 8                    |
|         |                         | ·                    |

TOTAL ASSIGNED\* = 813 TOTAL SURVEYED\*\* = 685 TOTAL IN SURVEY SAMPLE = 552 PERCENT OF ASSIGNED IN SAMPLE = 68% PERCENT OF SURVEYED IN SAMPLE = 81%

- \* Assigned strength as of March 1995
- \*\* Excludes personnel in PCS, student, or hospital status, or less than 6 weeks on the job

TABLE 2

PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

| GRADE     | PERCENT OF<br>ASSIGNED* | PERCENT OF<br>SAMPLE |
|-----------|-------------------------|----------------------|
| E-1 - E-3 | 10                      | 11                   |
| E-4       | 32                      | 30                   |
| E-5       | 31                      | 28                   |
| E-6       | 15                      | 17                   |
| E-7       | 11                      | 14                   |

<sup>\*</sup> Assigned strength as of March 1995

## Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 2E1X2 personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). These booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within the report.

TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 47 senior AFSC NCOs who completed a TE booklet were asked to select tasks they felt required some sort of structured training for entry-level personnel, and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. Interrater agreement for these 47 raters was acceptable. The average TE rating was 1.73, with a standard deviation of 1.48. Any task with a TE rating of 3.21 or above is considered to have high TE.

TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 49 senior NCOs who completed TD booklets were asked to rate the difficulty of each tasks using a 9-point scale (extremely low to extremely high). Interrater reliability was acceptable. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TE and TD ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting entry-level jobs.

# SPECIALTY JOBS

(Career Ladder Structure)

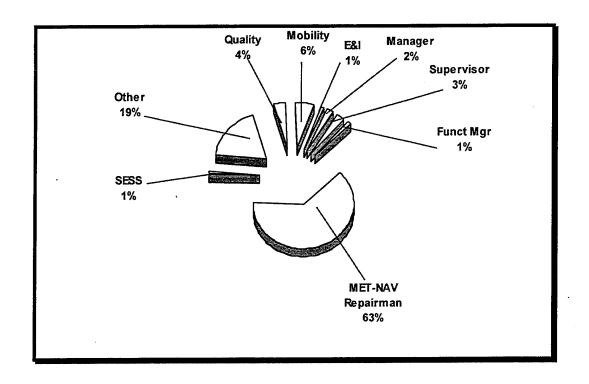
Each USAF occupational analysis begins with an examination of the career ladder structure. The structure of jobs within the Meteorological and Navigation Systems career ladder was examined on the basis of similarity of tasks performed and the percent of time spent ratings provided by job incumbents, independent of other specialty background factors.

Each individual in the sample performs a set of tasks called a <u>job</u>. For the purpose of organizing individual jobs into similar units of work, an automated job clustering program is used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program system for job analysis. Each individual job description (all the tasks performed by that individual and the relative amount of time spent on those tasks) in the sample is compared to every other job description in terms of tasks performed and the relative amount of time spent on each task in the JI. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and combine them to form a composite job description. In successive stages, new members are added to initial groups, or new groups are formed based on the similarity of tasks performed and similar time ratings in the individual job descriptions.

# Overview of Specialty Jobs

The analysis procedure described above identified eight jobs within the survey sample. The division of jobs performed by DAFSC 2E1X2 personnel is illustrated in Figure 1, and a listing of those jobs is provided below. The group (GP) or stage (ST) number shown beside each title is a reference to computer-printed information; the number of personnel in each group or stage (N) is also shown.

# AFSC 2E1X2 CAREER LADDER JOBS (N = 552)



# FIGURE 1

- I. MET/NAV REPAIRMAN (ST0038, N=349)
- II. MOBILITY (ST0069, N=35)
- III. ENGINEERING AND INSTALLATION (ST0097, N=8)
- IV. SOLAR ENVIRONMENTAL SUPPORT SYSTEMS (SESS) (ST0046, N=6)
- V. QUALITY CONTROL (ST0082, N=23)
- VI. WORKCENTER SUPERVISOR (ST0086, N=18)
- VII. WORKCENTER MANAGER (ST0104, N=11)
- VIII. FUNCTIONAL MANAGER (ST0076, N=5)

The respondents forming these jobs account for 81 percent of the survey sample. The remaining 19 percent, for one reason or another, did not accurately fall into one of these jobs. Examples of job titles for these people include job controller and central repair technician.

# **Group Descriptions**

The following paragraphs contain brief descriptions of the jobs identified through the career ladder structure analysis. Table 3 presents the relative time spent on duties by members of these specialty jobs. Selected background data for these jobs are provided in Table 4. Representative tasks for all the groups are contained in Appendix A.

I. <u>MET/NAV REPAIRMAN (ST0038)</u>. The 349 airmen forming this group (63 percent of the survey sample and the largest job identified) are responsible for the core work of the career ladder. Their responsibilities include the performance of various inspections, operating and maintaining meteorological and navigation systems, removing and replacing bulbs, measuring direct current (DC) voltages, and isolating malfunctions in various MET/NAV systems. The job is highly technical, with 96 percent of their relative job time devoted to the performance of maintenance functions. Typical of the average 282 tasks performed are:

inspect equipment for corrosion operate portable ILS receivers align FMQ-8 sensor bias complete FMQ-8 performance tests perform PMIs of AN/FRN-45 TACAN systems operate AN/FRN-45 input/output terminals measure AN/GRN-29 localizer clearance transmitter power outputs install dummy loads complete IP1456 performance tests test bail-out alarm systems

The majority of these airmen (61 percent) hold a 5-skill level DAFSC, while 23 percent have a 3-skill level DAFSC. The average time in the career field is just over 7 years. The paygrades range from E-2 to E-5, with E-4 and E-5 being the predominant paygrades. Furthermore, 78 percent of these members report they are assigned to units within the United States.

II. MOBILITY (ST0069). Comprising 6 percent of the survey sample, these 35 airmen are similar to the group discussed above, with responsibilities for maintaining much of the same equipment. They perform many tasks in common with the previous group and the time

spent on those tasks is also very comparable (see Table 3). The basic difference between the two is that the personnel forming this group also perform a series of tasks peculiar to mobility (note Duty W in Table 3). Distinctive tasks performed include:

pack or unpack tactical equipment
perform pallet buildups
load or unload equipment on aircraft mobilizers, pallets, or vehicles
set-up or tear down tents
install or remove camouflage netting
set-up or tear down site lighting fixtures
set-up or tear down mobile TACAN systems
set-up or tear down tent heaters

As with the MET/NAV Repairman cluster, the predominant paygrades in this mobility job are E-4 and E-5s. Their average time in service is 8 1/2 years. This group reports performing an average of 170 tasks, most of them technical in nature (see Table A2 in Appendix A).

III. <u>ENGINEERING AND INSTALLATION (ST0097)</u>. The eight members (1 percent of the survey sample) forming this group are differentiated from the overall sample because of their performance of tasks pertaining to a large number of installation tasks, with very little troubleshooting or repair work being accomplished. The job entails dispatching personnel in a team to perform the initial set-up of meteorological and navigation systems. Once installed, standard maintenance and repair functions are handled by personnel in the core MET/NAV Repairman Cluster described above. Typical job titles in this job are Team Member or Team Chief. Commonly performed tasks include:

assemble electrical junction boxes lace or tie-wrap wiring assemblies inventory equipment, supplies, or tools measure AC voltages measure DC voltages install or remove lighting protection interpret plans, diagrams, or schematics conduct postinstallation tests perform installation inspections install or remove electrical grounding systems fabricate electrical cables maintain tool kits fabricate conduits

Personnel in this job are somewhat more experienced than those found in the first two jobs discussed. Their average time in service is 145 months (vs. 105 and 102, respectfully). Eighty-eight percent hold either a 5- or 7-skill level DAFSC. Only 25 percent are in their first enlistment.

IV. <u>SOLAR ENVIRONMENTAL SUPPORT SYSTEM (SESS) (ST0046)</u>. As has been the case with the previously described jobs, the six airmen forming this group perform a broad range of tasks common to the core MET/NAV Repairman Cluster, but differ in regard to maintaining solar optical/radio observing equipment. Typical tasks which characterize this job include:

perform operational checks of FMQ-7 maintain test measurement diagnostic equipment (TMDE) perform corrosion control procedures align FMQ-7 television (TV) systems performance check FMQ-7 bar-dot generators and insert keyers service FRR-95 versatec plotters performance check FMQ-7 beam selectors or lens interchange perform operational checks of FMQ-7 TV manual switchers isolate malfunctions in FMQ-7 system units or major subassemblies analyze system circuit operations

The members in this group are predominantly E-5s, and have an average of 13 years time in service. Sixty-seven percent of these members are assigned within the CONUS. Only 17 percent of these members are supervising subordinates. None are in their first enlistment. These members perform an average of 116 tasks.

V. QUALITY CONTROL (ST0082). The 23 members of this group are distinguished from the previously described groups due to their performance of tasks pertaining to Air Force quality control programs and inspections. Forty-one percent of their job time is spent in Duty C, Inspecting and Evaluating (See Table 3). They perform an average of only 65 tasks (third smallest average of all the groups identified). Tasks displaying both the common core responsibilities and the unique functions for the group include:

inspect equipment or facilities
implement quality control programs
write special reports, staff studies, or surveys, other than material deficiency reports
conduct acceptance inspections
conduct staff assistance visits
conduct work center quality control inspections

inspect equipment for corrosion evaluate performance of MET/NAV equipment develop inspection schedules evaluate personnel proficiency evaluations conduct technical inspections

Predominant paygrade of these members is E-5 (65 percent), with only 8 percent being in their first enlistment. Eighty-seven percent are serving within the CONUS. The average time in service is 12 years.

VI. <u>WORKCENTER SUPERVISOR</u> (ST0086). The 18 members of this group are responsible for most of the work area or work center supervision tasks. These individuals are essentially first-line supervisors who both supervise and perform technical duties. They perform an average of 112 tasks. This group differentiates themselves from other supervisory jobs due to their high average number of tasks performed. Tasks displaying both the common core responsibilities and the unique functions for the group include:

participate in meetings
write EPRs
review supply transactions
supervise meteorological and navigation systems apprentices
(AFSC 2E132)
maintain CAMs workcenter listings
review correspondence
supervise meteorological and navigation systems journeymen
(AFSC 2E152)
direct maintenance of equipment and facilities
counsel personnel on personal or military-related matters
evaluate performance of meteorological and navigation systems
establish work priorities or schedules

In this specialty job, the predominant paygrades of group members are E-6 and E-7. Their total time in service is 16 years, with 83 percent stating they are serving stateside.

VII. <u>WORKCENTER MANAGER (ST0104)</u>. Unlike Workcenter Supervisors (Group VI above), these members concentrate most of their job time on supervisory and managerial duties. Very little of their job time is spent on technical tasks. This trend can be seen in the average number of tasks performed (44 vs. 112 for Workcenter Supervisors). Commonly performed tasks include:

draft budget requirements
plan briefings
evaluate fund expenditures
supervise military personnel with AFSCs other than 2E1X2
evaluate financial requirements
plan agenda for conferences, staff meetings, symposiums, or workshops
indorse enlisted performance reports (EPRs)
counsel trainees on training progress
plan briefings
participate in meetings, such as staff meetings, briefings, conferences, or
workshops
evaluate job or position descriptions
evaluate use of equipment, supplies, or workspace
write job or position descriptions

Most of these members are located within the United States (93 percent) while having an average of 18 years time in service. The predominant paygrade is E-7.

VIII. <u>FUNCTIONAL MANAGER</u> (ST0076). The five members forming this group (1 percent of the total sample) are distinguished from the other jobs because of their performance of tasks peculiar to Air Staff activities and planning concerning the 2E1X2 career ladder. These managers perform an average of 19 tasks (the smallest average number of tasks performed by any job in this career ladder). Representative tasks performed by members of this job include:

plan agenda for conferences, staff meetings, symposiums, or workshops
plan briefings
brief personnel on new directives
review team trip reports
select personnel for specialized training
write team trip reports
develop new equipment test plans
interpret directives, policies, or procedures for subordinates
evaluate changes to meteorological and navigation systems
write periodic maintenance summaries

Within this specialty job, 100 percent of these members maintain a 7-skill level DAFSC and on the average are Master Sergeants (E-7). These members stated they do not supervise in any capacity (0 percent supervising) and 80 percent stated they were assigned within the CONUS.

# Comparison of Current Jobs to Previous Survey Findings

The results of the specialty job analysis were compared to those of the last Weather and Navigation System Maintenance OSR published in 1989. As shown in Table 5, most of the jobs in the 1989 study were also identified in the current study. In both surveys, a large group of repairman were identified as the core job. This core job comprised 43 percent of the 1989 sample, compared to 63 percent of the 1995 sample. The SESS is new in the 1995 study. While job controllers and technical school instructors were also included in the current study, diversity in the tasks they perform precluded them from forming distinct jobs.

TABLE 3

COMPARISON OF JOB GROUPS IN CURRENT STUDY

VERSUS 1989 STUDY

|   | 11000 CMT IDAY  |
|---|---|
| 1995 STUDY  | 1989 STUDY  |
| (N=552)   | (N=1,132)   |
| Met/Nav Repairman (63% of sample)                 | LORAN C/D Maintenance Technicians (1% of sample) SSIL/TACAN Maint. Personnel (40% of sample) Tactical Weather Equip Maint Techs (1% of sample) Centralized Repair Activity (1% of sample) Fixed Weather Equipment Maintenance (30% of sample) |
| Mobility (6% of sample)                           | Navaids Mobility Unit Personnel (2% of sample)  |
| Engineering & Installation (1% of sample)         | Navaids Installation Personnel (1% of sample)   |
| ,   | Navaids Specialty Teams Cluster (3% of sample)  |
| Solar Environmental Support System (1% of sample) | Not Identified  |
| Quality Control (4% of sample)                    | Flight Inspection Technicians (less than 1% of sample)  |
| Workcenter Supervisor (3% of sample)              | Maintenance Staff Personnel (1% of sample)  |
| Workcenter Manager (2% of sample)                 | ì   |
| Functional Manager (1% of sample)                 |   |
| Not Identified                                    | Job Controllers (1% of sample)  |
| Not Identified                                    | Technical School Personnel (3% of sample)   |

TABLE 4

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS

| חמ  | DUTIES   | MET/NAV<br>REPAIRMAN<br>(STG0038)<br>(N=349) | MOBILITY<br>(STG0069)<br>(N=35) | ENGINEERING INSTALLATION (STG0097) (N=8) | SOLAR ENV<br>(SESS)<br>(STG0065)<br>(N=6) |
|-----|--|--|---------------------------------|--|---|
| ¥   | ORGANIZING AND PLANNING  | 2  | 2                               | 4  | 1   |
| В   | DIRECTING AND IMPLEMENTING                                     | 4  | m                               | က  | 2   |
| ပ ( | INSPECTING AND EVALUATING                                      | vo (   | 4,                              | ۲.                                       | ო -                                       |
| ם ב | LIKALINING<br>PEDECORARIC CENEDAT MATERIANICE MANIA CEMENT AND | 7 4  | n o                             | - 6                                      | 1<br>16                                   |
| 4   | ADMINISTRATIVE FUNCTIONS                                       | o  | 0                               | n  | 9   |
| ĹŦ  | PERFORMING GENERAL MAINTENANCE FUNCTIONS                       | 39   | 35                              | 20                                       | 41  |
| G   | MAINTAINING NONELECTRIC METEOROLOGICAL INSTRUMENTS AND         | т  | *                               | *  | 0   |
|     | SOLID-STATE BAROMETERS   |  |                                 |  |   |
| H   | MAINTAINING WIND, TEMPERATURE, VISIBILITY, THUNDERSTORM        | 10   | *                               | 3  | _   |
|     | SENSING, AND CLOUD SETS  |  |                                 |  |   |
| _   | MAINTAINING WIND, TEMPERATURE, AND CLOUD TACTICAL WEATHER      | 1  | *                               | *  | 0   |
|     | EQUIPMENT  |  |                                 |  |   |
| _   | MAINTAINING SOLAR OPTICAL AND RADIO OBSERVING EQUIPMENT        | -  | 0                               | 0  | 35  |
| ×   | INSTALLING OR REMOVING METEOROLOGICAL AND NAVIGATION           |  | S                               | 28                                       | 0   |
|     |  |  |                                 |  |   |
| _   | MAINTAINING LOW FREQUENCY BEACON (LFB) SYSTEMS                 | *  | 0                               | 0  | 0   |
| Σ   | MAINTAINING AN/GRN-27 SOLID-STATE INSTRUMENT LANDING SYSTEMS   | *  | 0                               | 0  | 0   |
|     | (SSILS)  | !  |                                 | ,  | ,   |
| z   | MAINTAINING AN/GRN-29 SSILS                                    | 17   |                                 | 0  | 0   |
| 0   | MAINTAINING MARKER BEACONS                                     | *  | 0                               | *  | 0   |
| Д   | MAINTAINING VHF OMNIRANGE (VOR) SYSTEMS                        | ю  | 0                               |  | 0   |
| 0   | MAINTAINING TACTICAL AIR NAVIGATION (TACAN) MONITORING GROUPS  | *  | 12                              | 0  | 0   |
|     | OR ANTENNAS  |  |                                 |  |   |
| ~   | MAINTAINING TACAN TRANSPONDERS ON ANGRN-19/20 SERIES SYSTEMS   | *  | *                               | 0  | 0   |
| S   | MAINTAINING AN/TRN-26 TACAN SYSTEMS                            | *  | 15                              | 0  | 0   |
| H   | MAINTAINING AN/TRN-41 TACAN SYSTEMS                            | *  |                                 | 0  | 0   |
| Ω   | MAINTAINING AN/FRN-45 TACAN SYSTEMS                            | S  | *                               | *  | 0   |
| >   | PERFORMING FLIGHT INSPECTIONS                                  | -  | *                               | *  | 0   |
| ≽   | PERFORMING MOBILITY REQUIREMENTS                               | *  | 11                              | *  | 0   |
|     |  |  |                                 |  |   |

\* Denotes less than .5 percent

TABLE 4 (CONTINUED)

# RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS

| DUTIES  | QUALITY<br>CONTROL<br>(STG0082)<br>(N=23) | WORKCENTER<br>SUPERVISOR<br>(STG0086)<br>(N=18) | WORKCENTER<br>MANAGER<br>(STG0104)<br>(N=11) | FUNCTIONAL<br>MANAGER<br>(STG0076)<br>(N=5) |
|---|---|---|--|---|
| A OBGANIZING AND BI ANNING                                      | 01  | 13  | <b>SC</b> .                                  | 38  |
| B DIRECTING AND IMPLEMENTING                                    | 12  | 20  | 25.  | 36<br>14                                    |
| C INSPECTING AND EVALUATING                                     | 41  | 24  | 31   | . 32  |
| D TRAINING  | ا ا                                       | 13  | 7  | ¦ <del>4</del>                              |
| E PERFORMING GENERAL MAINTENANCE MANAGEMENT AND                 | &   | 15  | 7  | 12  |
| ADMINISTRATIVE FUNCTIONS  |   |   |  |   |
| F PERFORMING GENERAL MAINTENANCE FUNCTIONS .                    | 16  | <b>∞</b>  | 6  | 0   |
| G MAINTAINING NONELECTRIC METEOROLOGICAL INSTRUMENTS AND        | -   |   | 0  | 0   |
| SOLID-STATE BAROMETERS  |   |   |  |   |
| H MAINTAINING WIND, TEMPERATURE, VISIBILITY, THUNDERSTORM       | 0   | 2   | 0  | 0   |
| SENSING, AND CLOUD SETS   |   |   |  |   |
| I MAINTAINING WIND, TEMPERATURE, AND CLOUD TACTICAL WEATHER     | 0   | *   | 0  | 0   |
| EQUIPMENT   |   |   |  |   |
| J MAINTAINING SOLAR OPTICAL AND RADIO OBSERVING EQUIPMENT       | 0   | 0   | 0  | 0   |
| K INSTALLING OR REMOVING METEOROLOGICAL AND NAVIGATION          | 2   | -   | *  | *   |
| SYSTEMS   |   |   |  |   |
| L MAINTAINING LOW FREQUENCY BEACON (LFB) SYSTEMS                | 0   | 0   | 0  | 0   |
| M MAINTAINING AN/GRN-27 SOLID-STATE INSTRUMENT LANDING SYSTEMS  | 0   | *   | 0  | 0   |
| (SSILS)   |   |   |  |   |
| N MAINTAINING AN/GRN-29 SSILS                                   | ec  | 2   | 0  | 0   |
| O MAINTAINING MARKER BEACONS                                    | *   | *   | 0  | 0   |
| P MAINTAINING VHF OMNIRANGE (VOR) SYSTEMS                       | -   | *   | 0  | 0   |
| Q MAINTAINING TACTICAL AIR NAVIGATION (TACAN) MONITORING GROUPS | 0   | 0   | 0  | 0   |
| OR ANTENNAS   |   |   |  |   |
| _   | *   | 0   | 0  | 0   |
| S MAINTAINING AN/TRN-26 TACAN SYSTEMS                           | 0   | *   | 0  | 0   |
| T MAINTAINING AN/TRN-41 TACAN SYSTEMS                           | *   | *   | 0  | 0   |
| U MAINTAINING AN/FRN-45 TACAN SYSTEMS                           | 0   | 1   | 0  | 0   |
| V PERFORMING FLIGHT INSPECTIONS                                 | *   |   | 0  | 0   |
| W PERFORMING MOBILITY REQUIREMENTS                              |   | *   | 2  | 0   |
|   |   |   |  |   |

\* Denotes less than .5 percent

TABLE 5

# SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

|  | MET/NAV<br>REPAIRMAN<br>(STG0038) | MOBILITY<br>(STG0069) | ENGINEERING & INSTALLATION (STG0097) | SESS<br>(STG0065) | QUALITY<br>CONTROL<br>(STG0082) |
|--|-----------------------------------|-----------------------|--------------------------------------|-------------------|---------------------------------|
| NUMBER IN GROUP                              | 349                               | 35                    | &                                    | 9                 | 23                              |
| PERCENT OF SAMPLE                            | 63%                               | <b>%9</b>             | 1%                                   | 1%                | 4%                              |
| PERCENT IN CONUS                             | 78%                               | 83%                   | 100%                                 | %19               | 87%                             |
| DAFSC DISTRIBUTION:                          |                                   |                       |                                      |                   |                                 |
| 2E132  | 23%                               | 14%                   | 12%                                  | %0                | %0                              |
| 2E152  | 61%                               | 72%                   | 20%                                  | %19               | %59                             |
| 2E172  | 16%                               | 14%                   | 38%                                  | 33%               | 35%                             |
| PREDOMINANT GRADE(S)                         | E-4/E-5                           | E-4/E-5               | E-4/E-5                              | E-5               | E-5                             |
| AVERAGE MONTHS IN CAREER FIELD               | 68                                | 92                    | 131                                  | 149               | 125                             |
| AVERAGE MONTHS IN SERVICE                    | 105                               | 102                   | 145                                  | 161               | 140                             |
| PERCENT IN FIRST ASSIGNMENT (1-48 MOS TAFMS) | 31%                               | 37%                   | 25%                                  | %0                | %8                              |
| PERCENT SUPERVISING                          | 47%                               | 46%                   | 37%                                  | 17%               | 26%                             |
| AVERAGE NUMBER OF TASKS PERFORMED            | 282                               | 170                   | 127                                  | 116               | 92                              |

TABLE 5 (CONTINUED)

# SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

|  | WORKCENTER<br>SUPERVISOR<br>(STG0086) | WORKCENTER<br>MANAGER<br>(STG0104) | FUNCTIONAL<br>MANAGER<br>(STG0076) |
|--|---------------------------------------|------------------------------------|------------------------------------|
| NUMBER IN GROUP                              | 18                                    | 11                                 | 5                                  |
| PERCENT OF SAMPLE                            | 3%                                    | 2%                                 | 1%                                 |
| PERCENT IN CONUS                             | 83%                                   | 91%                                | %08                                |
| DAFSC DISTRIBUTION:                          |                                       |                                    |                                    |
| 2E132  | %0                                    | %0                                 | %0                                 |
| 2E152  | 22%                                   | 18%                                | %0                                 |
| 2E172  | 78%                                   | 82%                                | 100%                               |
| PREDOMINANT GRADE(S)                         | E-6/E-7                               | E-7                                | E-7                                |
| AVERAGE MONTHS IN CAREER FIELD               | 166                                   | 190                                | 202                                |
| AVERAGE MONTHS IN SERVICE                    | 187                                   | 220                                | 208                                |
| PERCENT IN FIRST ASSIGNMENT (1-48 MOS TAFMS) | %0                                    | %0                                 | %0                                 |
| PERCENT SUPERVISING                          | 100%                                  | 91%                                | %0                                 |
| AVERAGE NUMBER OF TASKS PERFORMED            | 112                                   | 44                                 | 19                                 |

# **ANALYSIS OF DAFSC GROUPS**

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as the AFMAN 36-2108 Specialty Description and the Career Field Education and Training Plan, reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across the career ladder jobs is displayed in Table 6, while Table 7 offers another perspective by displaying the relative percent time spent on each duty across the skill-level groups. A typical pattern of progression is noted within the AFSC 2E1X2 career ladder. Personnel at the 3- and 5-skill levels work in the technical jobs of the career ladder and spend most of their time on technical tasks involving the maintenance of meteorological and navigation systems. As incumbents move up to the 7-skill level, higher percentages work in the supervision and management jobs, but many personnel still spend some time maintaining equipment or work in a support job.

# **Skill-Level Descriptions**

<u>DAFSC 2E132</u>. Representing 18 percent of the survey sample, these 99 airmen perform an average of 215 tasks. Eighty-three percent of these airmen are MET/NAV Repairmen (see Table 6). Only 5 percent of the 2E132s are performing the Mobility job, and 1 percent are Engineering and Installation team members.

Representative tasks performed by 3-skill level incumbents are listed in Table 8. Most tasks are general repair tasks and relate to Duty F (Performing General Maintenance Functions), Duty N (Maintaining AN/GRN-29 SSILs) and Duty H (Maintaining Wind, Temperature, Visibility, Thunderstorm Sensing, and Cloud Sets) (see Table 7).

<u>DAFSC 2E152</u>. Representing 58 percent of the survey sample (largest DAFSC group of the survey), these airmen perform an average of 237 tasks (somewhat higher than 3-skill level members). Most 5-skill level airmen (66 percent) are still MET/NAV Repairmen. However, the percent of 5-skill level personnel who are Mobility team members increases (8 percent versus 5 percent) and several are found in the Quality Control and Supervisory jobs (see Table 6).

Table 9 lists representative tasks performed by all 5-skill level personnel. Table 10 reflects those tasks which best differentiate 5-skill level personnel from their 3-skill level counterparts. The major difference among the two groups, as seen in Table 10, is that 5-skill level personnel perform a broader range of tasks, many being OJT or supervisory tasks.

<u>DAFSC 2E172</u>. Seven-skill level personnel represent 24 percent of the survey sample. Unlike their junior counterparts at the 3- and 5-skill levels, higher percentages of these personnel are working as Workcenter Supervisors (11 percent) and Workcenter Managers (7 percent). They are also represented in the Functional Manager specialty job (4 percent). However, 41 percent of the 7-skill level personnel are still working in the MET/NAV Repairman Cluster (see Table 6). Table 11 lists the most time consuming tasks performed by these airmen. Most of these involve supervisory functions. Table 12 shows those tasks which best differentiate the 5- and 7-skill levels. As expected, the key difference is a much greater emphasis on supervisory functions at the 7-skill level.

# **Summary**

Progression in this career ladder follows a regular pattern of highly technical jobs focusing at the lower skill levels, with a broadening into supervision at the 7-skill level. Emphasis is seen in performing primarily the core job of MET/NAV equipment maintenance at the 3- and 5-skill levels. Craftsmen at the 7-skill level are beginning to shift to supervision tasks, but a good deal of their job time is still spent in the technical arena. This progression is easily seen in Table 6 and serves the career ladder by providing a regular progression from the 3- to 7-skill level.

TABLE 6

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS (PERCENT RESPONDING)

| SPECI | SPECIAL TY JOBS                           | DAFSC<br>2E132<br>(N=99) | DAFSC<br>2E152<br>(N=320) | DAFSC<br>2E172<br>(N=133) |
|-------|---|--------------------------|---------------------------|---------------------------|
| I.    | METEOROLOGICAL AND NAVIGATION REPAIRMAN   | 83                       | 99                        | 41                        |
| II.   | MOBILITY                                  | ×۸                       | <b>∞</b>                  | 4                         |
| III.  | ENGINEERING AND INSTALLATION              | 1                        | _                         | 2                         |
| IV.   | SOLAR ENVIRONMENTAL SUPPORT SYSTEM (SESS) | ı                        | ı                         | 9                         |
| >     | QUALITY CONTROL                           |                          | 5                         | 9                         |
| VI.   | WORKCENTER SUPERVISOR                     | ı                        | 1                         | 11                        |
| VII.  | WORKCENTER MANAGER                        | ı                        |                           | 7                         |
| VIII. | FUNCTIONAL MANAGER                        | 1                        |                           | 4                         |
|       | NOT GROUPED                               | 11                       | 18                        | 19                        |

\* Less than .5 percent

TABLE 7

RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

| ᆈ          | DUTIES  | DAFSC<br>2E132<br>(N=99) | DAFSC<br>2E152<br>(N=320) | DAFSC<br>2E172<br>(N=133) |
|------------|---|--------------------------|---------------------------|---------------------------|
| <b>∀</b> 8 | ORGANIZING AND PLANNING DIRECTING AND IMPLEMENTING                            | 0 m                      | 8 8                       | 2 =                       |
| )<br>)     | INSPECTING AND EVALUATING   | n m                      | > ∞                       | 17                        |
| Ω          | TRAINING  |                          | 5                         | <b>∞</b>                  |
| 田          | PERFORMING GENERAL MAINTENANCE MANAGEMENT AND ADMINISTRATIVE FUNCTIONS        | 9                        | <b>∞</b>                  | 6                         |
| <u>[</u>   | PERFORMING GENERAL MAINTENANCE FUNCTIONS                                      | 38                       | 31                        | 21                        |
| Ð          | MAINTAINING NONELECTRIC METEOROLOGICAL INSTRUMENTS AND SOLID-STATE BAROMETERS | m                        | c                         | _                         |
| H          | MAINTAINING WIND, TEMPERATURE, VISIBILITY, THUNDERSTORM SENSING, AND          | 12                       | 7                         | 2                         |
|            | CLOUD SETS  |                          |                           |                           |
| <b>—</b>   | MAINTAINING WIND, TEMPERATURE, AND CLOUD TACTICAL WEATHER EQUIPMENT           | 2                        | _                         | *                         |
| <b>-</b>   | MAINTAINING SOLAR OPTICAL AND RADIO OBSERVING EQUIPMENT                       | *                        | _                         | 7                         |
| ×          | INSTALLING OR REMOVING METEOROLOGICAL AND NAVIGATION SYSTEMS                  | 2                        | 3                         | 7                         |
|            | MAINTAINING LOW FREQUENCY BEACON (LFB) SYSTEMS                                | *                        | *                         | *                         |
| Z          | MAINTAINING AN/GRN-27 SOLID-STATE INSTRUMENT LANDING SYSTEMS (SSILS)          | *                        | *                         | *                         |
| Z          | MAINTAINING AN/GRN-29 SSILS   | 17                       | 17                        | 9                         |
| 0          | MAINTAINING MARKER BEACONS  | _                        | *                         | *                         |
| Д          | MAINTAINING VHF OMNIRANGE (VOR) SYSTEMS                                       | 2                        | 7                         | 7                         |
| 0          | MAINTAINING TACTICAL AIR NAVIGATION (TACAN) MONITORING GROUPS OR ANTENNAS     | 1                        | 1                         | _                         |
| ×          | MAINTAINING TACAN TRANSPONDERS ON AN/GRN-19/20 SERIES SYSTEMS                 | *                        | *                         | *                         |
| S          | MAINTAINING AN/TRN-26 TACAN SYSTEMS   | 1                        | -                         | _                         |
| Η          | MAINTAINING AN/TRN-41 TACAN SYSTEMS   | *                        | _                         | *                         |
| )          | MAINTAINING AN/FRN-45 TACAN SYSTEMS   | 4 +                      | ω ,                       | 7                         |
| > ≱        | PERFORMING FLIGHT INSPECTIONS PERFORMING MOBILITY REOLITREMENTS               | * -                      | <b>-</b> c                | - 5                       |
| ;          |   | <b>-</b>                 | 7                         | <b>-</b>                  |

\* Denotes less than .5 percent

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY 2E132 PERSONNEL

| TASKS |   | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=99) |
|-------|---|--|
|       |   | 02   |
| F0265 | Inspect Equipment for corrosion   | 92<br>86                                   |
| F0379 | Remove or replace bulbs   | 83   |
| F0324 | Measure DC voltages   | 80   |
| F0334 | Perform corrosion control procedures  | 78   |
| H0500 | Align FMQ-8 dewpoint and ambient air temperature mechanisms                           | 75   |
| H0501 | Align FMQ-8 sensor bias   | 75<br>75                                   |
| E0145 | Identify parts using illustrated parts breakdowns (IPBs)                              | 73<br>74                                   |
| H0542 | Perform operational checks of FMQ-8 temperature-dew point measuring sets              | /4   |
| F0230 | Communicate over radio during operational tests                                       | 73   |
| U1229 | Perform PMIs of AN/FRN-45 TACAN systems   | 73   |
| N0931 | Measure AN/GRN-29 glideslope course transmitter power outputs                         | 73   |
| N0930 | Measure AN/GRN-29 glidescope course transmitter percent-of-modulation                 | 73   |
| H0514 | Complete FMQ-8 performance tests  | 72   |
| F0282 | Install dummy loads   | 72   |
| N0939 | Measure AN/GRN-29 localizer course transmitter 90/150 Hz percent-of-modulation        | 72   |
| N0935 | Measure AN/GRN-29 localizer clearance transmitter power outputs                       | 71   |
| H0513 | Complete FMQ-13 performance tests   | 71   |
| N0936 | Measure AN/GRN-29 localizer clearance transmitter 90/150 Hz percent-of-modulation     | 71   |
| F0366 | Perform radiation pattern ground checks   | 70   |
| F0365 | Perform preventive maintenance inspections (PMI) on bail-out systems                  | 70   |
| N0938 | Measure AN/GRN-29 localizer course transmitter power outputs                          | 70   |
| F0465 | Test bail-out alarm systems   | 69   |
| F0223 | Analyze system block diagram functional operations                                    | 69   |
| F0370 | Record radiation pattern ground check readings  | 67   |
| F0264 | Inspect equipment components  | 66   |
| E0158 | Maintain preventive maintenance inspection (PMI) listings                             | 52   |
| A0019 | Participate in meetings, such as staff meetings, briefings, conferences, or workshops | 47   |
| E0164 | Maintain vehicle control logs   | 45   |
| B0032 | Coordinate inspection and maintenance of equipment with appropriate agencies          | 39   |
| B0033 | Coordinate repair activities with appropriate agencies                                | 30   |

<sup>\*</sup> Average Number of Tasks Performed - 189

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY 2E152 PERSONNEL

| TASKS |   | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=320) |
|-------|---|---|
|       |   |   |
| F0265 | Inspect equipment for corrosion   | 83  |
| F0334 | Perform corrosion control procedures  | 73  |
| E0145 | Identify parts using illustrated parts breakdowns (IPBs)                              | 72  |
| F0264 | Inspect equipment components  | 72  |
| F0379 | Remove or replace bulbs   | 71  |
| F0324 | Measure DC voltages   | 71  |
| E0148 | Inventory equipment, supplies, or tools   | 70  |
| F0263 | Inspect electrical wiring   | 69  |
| F0223 | Analyze system block diagram functional operations                                    | 68  |
| A0019 | Participate in meetings, such as staff meetings, briefings, conferences, or workshops | 63  |
| C0088 | Inspect equipment or facilities   | 63  |
| F0245 | Evaluate equipment parameters, such as meter readings                                 | 63  |
| E0158 | Maintain preventive maintenance inspection (PMI) listings                             | 61  |
| C0055 | Certify status of condemned, reparable, or serviceable parts                          | 61  |
| B0032 | Coordinate inspection and maintenance of equipment with appropriate activities        | 59  |
| E0153 | Maintain core automated maintenance system (CAMS) workcenter listings                 | 57  |
| F0363 | Perform operator maintenance on vehicles  | 57  |
| D0106 | Conduct OJT   | 55  |
| C0077 | Evaluate performance of meteorological and navigation systems                         | 55  |
| B0033 | Coordinate repair activities with appropriate agencies                                | 50  |
| D0129 | Maintain training records, charts, graphs, or files                                   | 48  |
| B0037 | Direct maintenance of equipment or facilities   | 48  |
| B0034 | Counsel personnel on personal or military-related matters                             | 48  |
| E0163 | Maintain TO files   | 47  |
| C0078 | Evaluate personnel for compliance with performance or work standards                  | 43  |
| A0018 | Establish work priorities or schedules  | 41  |
| E0151 | Maintain charts, graphs, or status boards   | 40  |
| E0149 | Maintain administrative files   | 38  |
| E0160 | Maintain publication files, other than technical order (TO) files                     | 35  |
| A0003 | Determine requirements for equipment, personnel, space, or supplies                   | 34  |
| E0154 | Maintain equipment status reports   | 33  |

<sup>\*</sup> Average Number of Tasks Performed - 220

# TABLE 10

# TASKS WHICH BEST DIFFERENTIATE BETWEEN

|       | DAFSCs 2E132 AND 2E152 PERSONNEL (PERCENT MEMBERS PERFORMING)              |                |                |      |
|-------|--|----------------|----------------|------|
|       |  | DAFSC<br>2E132 | DAFSC<br>2E152 |      |
| TASKS |  | (N=99)         | (N=320)        | DIFF |
| H0500 | Align FMQ-8 dewpoint and ambient air temperature mechanisms                | 78             | 55             | +23  |
| H0553 | Perform turn on-off procedures for FMQ-13 and check for normal indications | 74             | 52             | +22  |
| H0523 | Isolate malfunctions in FMQ-8 systems                                      | 9/             | 55             | +20  |
| H0545 | Perform operational checks of GMQ-32 transmissometer sets                  | 69             | 49             | +19  |
| E0164 | Maintain vehicle control logs  | 45             | 27             | +19  |
| H0513 | Complete FMQ-13 performance tests  | 71             | 52             | +19  |
| H0542 | Perform operational checks of FMQ-8 temperature-dew point measuring sets   | 74             | 25             | +18  |
| H0501 | Align FMQ-8 sensor bias  | 75             | 57             | +18  |
| H0543 | Perform operational checks of GMQ-13 cloud height measuring sets           | 25             | <b>∞</b>       | +17  |
| H0550 | Perform turn on-off procedures for CT-12K and check for normal indications | 92             | 59             | +17  |
| N0929 | Measure AN/GRN-29 glideslope clearance transmitter power outputs           | 59             | 42             | +17  |
| F0365 | Perform preventive maintenance inspections (PMI) on bail-out systems       | 70             | 54             | +16  |
| D0106 | Conduct OJT  | 14             | 55             | -41  |
| C0055 | Certify status of condemned, reparable, or serviceable parts               | 25             | 61             | -36  |
| C0078 | Evaluate personnel for compliance with performance or work standards       | 10             | 43             | -33  |
| B0034 | Counsel personnel on personal or military-related matters                  | 18             | 48             | -30  |
| C0077 | Evaluate performance of meteorological and navigation systems              | 24             | 55             | -30  |
| C0063 | Conduct technical inspections  | 13             | 41             | -28  |
| D0130 | Plan and schedule OJT  | 12             | 38             | -26  |
| E0180 | Review supply transaction listings or rosters, such as D-04, D-18, or M-30 | 23             | 48             | -25  |
| D0129 | Maintain training records, charts, graphs, or files                        | 23             | 48             | -25  |
| C0074 | Evaluate maintenance data collection reports                               | 12             | 35             | -23  |
| D0109 | Counsel trainees on training progress                                      | 15             | 38             | -23  |
| B0045 | Implement self-inspection programs   | 6              | 33             | -23  |

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY 2E172 PERSONNEL

| TASKS |  | PERCENT<br>MEMBERS<br>PERFORMING<br>(N=133) |
|-------|--|---|
|       |  |   |
| A0019 | Participate in meetings, such as staff meetings, briefings, conferences, or workshops    | 88  |
| C0092 | Review correspondence  | 72  |
| B0034 | Counsel personnel on personal or military-related matters                                | 71  |
| B0028 | Brief personnel on new directives  | 69  |
| C0096 | Write EPRs   | 63  |
| A0003 | Determine requirements for equipment, personnel, space, or supplies                      | 62  |
| B0032 | Coordinate inspection and maintenance of equipment with appropriate activities           | 62  |
| B0047 | Interpret directives, policies, or procedures for subordinates                           | 60  |
| A0018 | Establish work priorities or schedules   | 59  |
| C0078 | Evaluate personnel for compliance with performance or work standards                     | 59  |
| A0026 | Schedule personnel for temporary duty (TDY) assignments, leaves, or passes               | 59  |
| C0079 | Evaluate personnel for promotion, demotion, reclassification, or special rewards         | 57  |
| B0037 | Direct maintenance of equipment or facilities  | 57  |
| B0040 | Draft budget requirements  | 56  |
| E0149 | Maintain administrative files  | 56  |
| A0012 | Establish performance standards for subordinates   | 56  |
| A0017 | Establish work methods or procedures   | 54  |
| C0088 | Inspect equipment or facilities  | 54  |
| A0008 | Develop self-inspection checklists   | 54  |
| C0098 | Write replies to inspection reports  | 53  |
| C0084 | Evaluate use of equipment, supplies, or workspace  | 53  |
| D0129 | Maintain training records, charts, graphs, or files                                      | 53  |
| A0021 | Plan briefings   | 47  |
| B0035 | Direct development or maintenance of charts, graphs, or status boards                    | 46  |
| C0072 | Evaluate inspection reports or procedures  | 46  |
| C0094 | Review maintenance data files  | 44  |
| C0099 | Write special reports, staff studies, or surveys, other than material deficiency reports | 41  |
| A0009 | Draft directives   | 39  |
| A0020 | Plan agenda for conferences, staff meetings, symposiums, or workshops                    | 33  |
| C0097 | Write inspection reports   | 29  |
| B0029 | Conduct supervisory orientation of newly assigned personnel                              | 64  |

<sup>\*</sup> Average Number of Tasks Performed - 198

TABLE 12

# TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSCs 2E152 AND 2E172 PERSONNEL (PERCENT MEMBERS PERFORMING)

|       | DAFSCS ZEI3Z AND ZEI7Z FERSONNEL<br>(PERCENT MEMBERS PERFORMING)                         |                |                |      |
|-------|--|----------------|----------------|------|
|       |  | DAFSC<br>2E152 | DAFSC<br>2E172 |      |
| TASKS |  | (N=320)        | (N=133)        | DIFF |
| H0515 | Complete IP-1456 performance tests   | 09             | 28             | +32  |
| H0550 | Perform turn on-off procedures for CT-12K and check for normal indications               | 59             | 27             | +32  |
| H0512 | Complete CT-12K performance tests  | . 61           | 53             | +31  |
| F0334 | Perform corrosion control procedures   | 73             | 42             | +31  |
| H0514 | Complete FMQ-8 performance tests   | 58             | 28             | +31  |
| G0486 | Perform operational checks of ML-102 aneroid barometers                                  | 49             | 20             | +29  |
| F0265 | Inspect equipment for corrosion  | 83             | 25             | +29  |
| H0501 | Align FMQ-8 sensor bias  | 57             | 53             | +28  |
| H0542 | Perform operational checks of FMQ-8 temperature-dew point measuring sets                 | 55             | 27             | +28  |
| G0479 | Inspect ML-102 aneroid barometers  | 54             | 56             | +28  |
| G0490 | Perform turn on-off procedures for ML-658 and check for normal indications               | 58             | 53             | +28  |
| H0558 | Perform turn on-off procedures for IP-1456 and check for normal indications              | 57             | 56             | +28  |
| F0279 | Inspect lead-acid batteries or battery boxes   | 58             | 31             | +28  |
| D0102 | Assign on-the-job training (OJT) trainers  | 15             | 42             | -27  |
| B0053 | Supervise Meteorological and Navigation Systems Craftsmen (AFSC 2E172)                   | 4              | 32             | -27  |
| C0099 | Write special reports, staff studies, or surveys, other than material deficiency reports | 13             | 41             | -27  |
| A0003 | Determine requirements for equipment, personnel, space or supplies                       | 34             | 62             | -29  |
| B0028 | Brief personnel on new directives  | 39             | 69             | -30  |
| A0021 | Plan briefings   | 17             | 47             | -30  |
| C0079 | Evaluate personnel for promotion, demotion, reclassification, or special rewards         | 27             | 27             | -31  |
| B0029 | Conduct supervisory orientation of newly assigned personnel                              | 33             | 64             | -31  |
| A0026 | Schedule personnel for temporary duty (TDY) assignments, leaves, or passes               | 28             | 59             | -32  |
| A0001 | Assign personnel to duty positions   | 18             | 53             | -35  |
| B0040 | Draft budget requirements  | 17             | 99             | -39  |
| C0092 | Review correspondence  | 29             | 72             | -43  |

# ANALYSIS OF AFMAN 36-2108 SPECIALTY DESCRIPTION

Survey data were compared to the AFMAN 36-2108 Specialty Description for Meteorological and Navigation Systems, dated 31 October 1994. The overall specialty description for the 3-, 5-, and 7-skill levels accurately describes the technical and supervisory nature of jobs at the various skill levels. The description also reflects the primary tasks and responsibilities discussed in the SPECIALTY JOBS section of this report. However, almost no mention is made of support jobs, such as Quality Control. The specialty description should be carefully reviewed against the job structure described in the SPECIALTY JOBS section of this OSR to ensure all technical and support functions are adequately covered in sufficient detail.

## TRAINING ANALYSIS

Occupational survey data is one of the many sources of information which can be used to assist in the development of a training program relevant to the needs of personnel in their first enlistment. Factors which may be used in evaluating training include the overall description of the job being performed by first-enlistment personnel and their overall distribution across career ladder jobs, percentages of first-job (1-24 months TAFMS) or first-enlistment (1-48 months TAFMS) members performing specific tasks, as well as TE and TD ratings (previously explained in the SURVEY METHODOLOGY section).

# First-Enlistment Personnel

In this study, there are 96 members in their first enlistment (1-48 months TAFMS), representing 17 percent of the total survey sample. The jobs performed by these personnel are highly technical in nature, with the majority of their time spent on tasks pertaining to the maintenance of various Meteorological and Navigation systems (see Figure 2).

Table 13 displays the relative percent of time spent on duties by first-enlistment personnel. Reviewing the table, it is clearly evident that most first-enlistment personnel are performing tasks under Duty F (Performing General Maintenance Functions), Duty N (Maintaining AN/GRN-29 SSILs), and Duty H (Maintaining Wind, Temperature, Visibility, Thunderstorm Sensing, and Cloud Sets).

Table 14 lists representative tasks performed by first-enlistment personnel. Inspecting equipment for corrosion, removing or replacing bulbs, and performing corrosion control procedures are examples of the top tasks.

Table 15 lists all of the Test Equipment used by 30 percent or more of first-term airmen. Examples of the test equipment are oscilloscopes, digital multimeters, digital analyzers and counters.

Tables 16 and 17 list Weather (Table 16) and Navigation (Table 17) equipment that 30 percent or more first-enlistment airmen perform maintenance on. As shown in Table 16, the AN/FMQ-8 temp-dew point measuring sets and AN/FMQ-13 wind measuring sets are the primary weather equipment maintained. Table 17 shows the AN/FRN-45 tactical air navigation and AN/GRN-29 ILS with null reference glideslope are the primary navigation systems being maintained.

Finally, Table 18 lists all of the forms used by 30 percent or more of the first-enlistment personnel. The most common forms maintained by first-enlistment personnel are DD Form 1577, DD Form 1577-2, DD Form 1574, and AFTO Form 350.

# FIRST-ENLISTMENT PERSONNEL JOBS (N = 96)

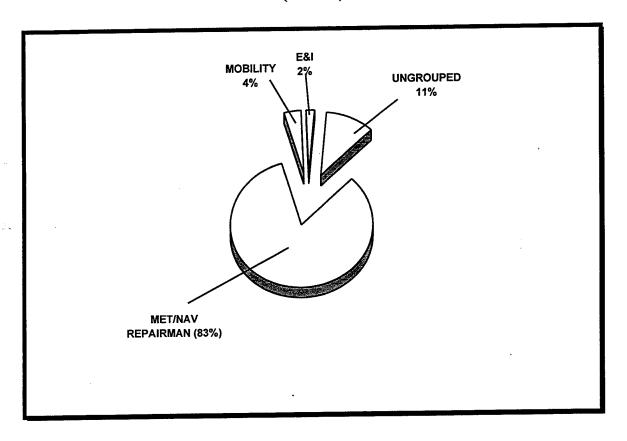


FIGURE 2

TABLE 13  $\label{eq:relative} \mbox{ RELATIVE PERCENT TIME SPENT ON DUTIES BY FIRST-ENLISTMENT PERSONNEL } (N=96)$ 

|              |   | PERCENT<br>TIME |
|--------------|---|-----------------|
| DŪ           | JTIES   | SPENT           |
|              |   | _               |
| Α            | ORGANIZING AND PLANNING                               | 1               |
| В            | DIRECTING AND IMPLEMENTING                            | 2               |
| C            | INSPECTING AND EVALUATING                             | 2               |
| D            | TRAINING  | 1               |
| E            | PERFORMING GENERAL MAINTENANCE MANAGEMENT AND         | 6               |
|              | ADMINISTRATIVE FUNCTIONS                              |                 |
|              | PERFORMING GENERAL MAINTENANCE FUNCTIONS              | 40              |
| G            | MAINTAINING NONELECTRIC METEOROLOGICAL INSTRUMENTS    | 3               |
|              | AND SOLID-STATE BAROMETERS                            |                 |
| Η            | MAINTAINING WIND, TEMPERATURE, VISIBILITY,            | 12              |
|              | THUNDERSTORM SENSING, AND CLOUD SETS                  |                 |
| Ι            | MAINTAINING WIND, TEMPERATURE, AND CLOUD TACTICAL     | 1               |
|              | WEATHER EQUIPMENT                                     |                 |
| J            | MAINTAINING SOLAR OPTICAL AND RADIO OBSERVING         | *               |
|              | EQUIPMENT   |                 |
| K            | INSTALLING OR REMOVING METEOROLOGICAL AND             | 3               |
|              | NAVIGATION SYSTEMS                                    | ata.            |
| $\mathbf{L}$ | MAINTAINING LOW FREQUENCY BEACON (LFB) SYSTEMS        | *               |
| M            | MAINTAINING AN/GRN-27 SOLID-STATE INSTRUMENT LANDING  | *               |
|              | SYSTEMS (SSILS)                                       |                 |
| N            | MAINTAINING AN/GRN-29 SSILS                           | 16              |
| Ο            | MAINTAINING MARKER BEACONS                            | 1               |
| P            | MAINTAINING VHF OMNIRANGE (VOR) SYSTEMS               | 3               |
| Q            | MAINTAINING TACTICAL AIR NAVIGATION (TACAN)           | 1               |
|              | MONITORING GROUPS OR ANTENNAS                         |                 |
| R            | MAINTAINING TACAN TRANSPONDERS ON AN/GRN-19/20 SERIES | *               |
|              | SYSTEMS   |                 |
| $\mathbf{S}$ | MAINTAINING AN/TRN-26 TACAN SYSTEMS                   | 1               |
| T            | MAINTAINING AN/TRN-41 TACAN SYSTEMS                   | *               |
| U            | MAINTAINING AN/FRN-45 TACAN SYSTEMS                   | 4               |
|              | PERFORMING FLIGHT INSPECTIONS                         | *               |
| W            | PERFORMING MOBILITY REQUIREMENTS                      | 1               |

<sup>\*</sup> Denotes less than .5 percent

# TABLE 14

# REPRESENTATIVE TASKS PERFORMED BY 2E1X2 FIRST-ENLISTMENT PERSONNEL (N=96)

|         |   | PERCENT<br>MEMBERS |
|---------|---|--------------------|
| TASKS   |   | PERFORMING         |
|         |   | 0.4                |
| F0265   | Inspect equipment for corrosion   | 94                 |
| F0379   | Remove or replace bulbs   | 83                 |
| F0334   | Perform corrosion control procedures  | 82                 |
| F0324   | Measure DC voltages   | 79                 |
| F0264   | Inspect equipment components  | 75                 |
| H0500   | Align FMQ-8 dewpoint and ambient air temperature mechanisms                           | 75                 |
| F0230   | Communicate over radio during operational tests                                       | 73                 |
| F0223   | Analyze system block diagram functional operations                                    | 73                 |
| F0282   | Install dummy loads   | 73                 |
| N0930   | Measure AN/GRN-29 glidescope course transmitter percent-of-modulation                 | 73                 |
| N0935   | Measure AN/GRN-29 localizer clearance transmitter power outputs                       | 72                 |
| N0931   | Measure AN/GRN-29 glidescope course transmitter power outputs                         | 72                 |
| F0263   | Inspect electrical wiring   | 72                 |
| E0145   | Identify parts using illustrated parts breakdowns (IPBs)                              | 71                 |
| H0513   | Complete FMQ-13 performance tests   | 71                 |
| H0501   | Align FMQ-8 sensor bias   | 70                 |
| H0514   | Complete FMQ-8 performance tests  | 70                 |
| F0224   | Analyze system circuit operations   | 70                 |
| F0366   | Perform radiation pattern ground checks   | 68                 |
| F0365   | Perform preventive maintenance inspections (PMIs) on bail-out systems                 | 67                 |
| F0465   | Test bail-out alarm systems   | 66                 |
| F0370   | Record radiation pattern ground check readings  | 64                 |
| F0318   | Maintain tool kits  | 63                 |
| E0158   | Maintain preventive maintenance inspections (PMI) listings                            | 48                 |
| A0019   | Participate in meetings, such as staff meetings, briefings, conferences, or workshops | 47                 |
| B0032   | Coordinate inspection and maintenance of equipment with appropriate activities        | 34                 |
| · B0033 | Coordinate repair activities with appropriate agencies                                | 25                 |

Average Number of Tasks Performed - 185

TABLE 15

TEST EQUIPMENT USED BY
30 PERCENT OR MORE FIRST-ENLISTMENT AFSC 2E1X2 PERSONNEL

| EQUIPMENT   | 1ST JOB<br>(N=21) | 1ST ENL<br>(N=96) |
|---|-------------------|-------------------|
|   |                   |                   |
| Oscilloscopes                                       | 100               | 95                |
| Multimeters, digital                                | 100               | 93                |
| Analyzers, spectrum                                 | 90                | 90                |
| Counters, electronic frequency                      | 90                | 90                |
| Dummy loads   | 90                | 90                |
| Power supplies, external                            | 33                | 83                |
| Meters, peak power                                  | 86                | 80                |
| Directional couplers                                | 76                | 71                |
| Voltmeters, digital                                 | 71                | 70                |
| Wattmeters  | 71                | 68                |
| Detectors, portable field instrument landing system | 71                | 66                |
| Voltmeters, vector                                  | 71                | 65                |
| Attenuators, Fixed, 50-3 or 50-5                    | 67                | - 59              |
| Logic probes  | 67                | 58                |
| Attenuators, In-Line                                | 62                | 57                |
| Attenuators, Variable                               | 62                | 57                |
| Attenuators, set                                    | 52                | 55                |
| Generators, RF sweep signal                         | 52                | 55                |
| Stopwatches   | 38                | 53                |
| Decade resistors                                    | 38                | 50                |
| Generators, audio signal                            | 38                | 49                |
| Meters, average power                               | 29                | 44                |
| Meters, frequency                                   | 43                | 43                |
| Detectors, radio frequency (RF)                     | 48                | 42                |
| High voltage probes                                 | 38                | 42                |
| Butt sets   | 33                | 40                |
| Counters, electronic digital                        | 38                | 39                |
| Multimeters, other than digital                     | 33                | 36                |
| Compasses   | 29                | 35                |
| Standing wave ratio indicators                      | 14                | 32                |

TABLE 16

WEATHER EQUIPMENT MAINTAINED BY
30 PERCENT OR MORE FIRST-ENLISTMENT AFSC 2E1X2 PERSONNEL

| EQUIPMENT   | 1ST JOB<br>(N=21) | 1ST ENL<br>(N=96) |
|---|-------------------|-------------------|
|   |                   |                   |
| AN/FMQ-8 Temp-dew point measuring sets                | 100               | 82                |
| AN/FMQ-13 Wind measuring sets                         | 100               | 80                |
| CT-12K Cloud height measuring sets                    | 90                | 77                |
| AN/GMQ-32 Transmissometer sets                        | 86                | 71                |
| ML-17 Rain gauges                                     | 71                | 71                |
| IP-1456 Cloud height measuring sets                   | 76                | 70                |
| ML-102 Aneroid barometers                             | 67                | 70                |
| ML-658/GM Digital altimeter barometers                | 67                | 69                |
| ML-24 Sling psychrometers                             | 62                | 68                |
| AN/TMQ-34 Transportable meteorological observing sets | 71                | 63                |
| AN/GMQ-13 Cloud height measuring sets                 | 57                | 39                |
| AN/GMQ-33 Transportable cloud height measuring sets   | 43                | 39                |
| AN/TMQ-36 Transportable wind measuring sets           | 38                | 38                |
| AN/GMQ-20 Wind measuring sets                         | 52                | 35                |

TABLE 17

NAVIGATION EQUIPMENT MAINTAINED BY
30 PERCENT OR MORE FIRST-ENLISTMENT AFSC 2E1X2 PERSONNEL

| EQUIPMENT   | 1ST JOB<br>(N=21) | 1ST ENL<br>(N=96) |
|---|-------------------|-------------------|
| AN/FRN-45 Tactical air navigation (TACAN) AN/GRN-29 ILS with null reference glideslope AN/GRN-29 ILS with capture effect glideslope | 67<br>48<br>48    | 69<br>44<br>40    |

TABLE 18

FORMS USED BY
30 PERCENT OR MORE FIRST-ENLISTMENT AFSC 2E1X2 PERSONNEL

|   | 1ST JOB | 1ST ENL |
|---|---------|---------|
| FORMS   | (N=21)  | (N=96)  |
|   |         |         |
| DD 1577, Unserviceable (Condemned) Tag Material             | 76      | 84      |
| DD 1577-2, Unserviceable (Reparable) Tag Material           | , 71    | 84      |
| DD 1574, Serviceable Tag-Material                           | 76      | 82      |
| AFTO 350, Repairable Item Processing tag                    | 86      | 80      |
| AFTO 349, Maintenance Data Collection Report                | 81      | 72      |
| AF 2005, Issue/Turn-in Receipt                              | 67      | 69      |
| AF 2413, Supply Control Log                                 | 57      | 59      |
| AFTO 22, Tech Order System Publication Improvement Report   | 52      | 53      |
| and Reply   |         |         |
| DD 1575, Suspended Tag-Material                             | 48      | 52      |
| DD 1348-6, DOD Single Line Item Requisition System Document | 29      | 34      |
| AF 9, Request For Purchase                                  | 19      | 31      |
| DD 1348-1, DOD Single Line Item Release/Receipt Document    | 33      | 31      |

# Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, are collected to provide training personnel with a rank-ordering of those tasks in the JI considered important for first-enlistment personnel training (see Table 19 for the top-rated tasks), along with a measure of the difficulty of the JI tasks (see selected high rated tasks presented in Table 20). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can then be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. These indicators correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, AETCR 52-22, and allows course personnel to quickly focus their attention on those tasks which are most likely to qualify for initial resident course consideration.

Table 19 presents tasks with the highest TE ratings for 2E1X2 first-enlistment airmen, while Table 20 displays those tasks 2E1X2 raters judged to be most difficult to learn to perform. For example, TE raters (refer to Table 19) reported that tasks such as analyzing system block diagram functional operations and measuring AN/GRN-29 glideslope antenna VSWRs require a lot of training emphasis, from the data, most airmen in their first job and within their first term are performing these tasks. Table 20 shows TD raters reported installing or removing VOR or terminal VOR (TVOR) systems, and constructing and designing circuitry to be difficult tasks to learn. However, due to the low numbers of individuals performing these types of tasks, these tasks would be inappropriate for including in a technical resident curriculum and is more appropriately taught as an OJT item.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate, ATI information, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. (For a more detailed explanation of TE and TD ratings, see <u>Task Factor Administration</u> in the **SURVEY METHODOLOGY** section of this report.)

# TASKS RATED HIGHEST IN TRAINING EMPHASIS

|   | 1 m m  | - 9 0          | , <sub>C</sub>  | 9                            | 7 0  | <b>√ ∞</b>                  | 2                                  | <b>∞</b>  | ξ   | 0     | 0     | 0     | <u></u> | 33    | 0                          | 9     | 6   |
|---|--|----------------|---|------------------------------|--|-----------------------------|------------------------------------|---|---|-------|-------|-------|---------|-------|----------------------------|-------|---|
| TASK<br>DIFF*   | 5.63   | 3.16           | 4.87  | 6.7                          | 4.72   | 7.48                        | 2.92                               | 4.7   | 4.75  | 7.10  | 6.90  | 6.90  | 6.57    | 3.93  | 5.5                        | 4.    | 4.29  |
| ENT<br>BERS<br>RMING<br>1ST ENL<br>(N=96)             | 73   | 00<br>79       | 63  | 55                           | 22.09  | 56                          | 71                                 | 73  | 72  | 54    | 99    | 99    | 70      | 45    | 59                         | 71    | 72  |
| PERCENT MEMBERS PERFORMING IST JOB IST EI (N=21) (N=9 | 76 52  | 75<br>86<br>67 | 57  | 38                           | 81<br>38   | 38                          | <i>L</i> 9                         | 9/  | 92  | 38    | 43    | 43    | 71      | 38    | <i>L</i> 9                 | 98    | 81  |
| TNG<br>EMP*   | 6.11   | 5.91           | 5.7   | 5.7                          | 5.68   | 5.60                        | 5.57                               | 5.55  | 5.53  | 5.53  | 5.51  | 5.51  | 5.49    | 5.49  | 5.47                       | 5.45  | 5.45  |
|   | Analyze system block diagram functional operations  Measure AN/GRN-29 glideslope antenna VSWRs |                | Measure AN/FRN-29 localizer aluellila v.3 w.r.s. Operate AN/FRN-45 input/output terminals | Perform AN/GRN-29 glideslope | Measure AN/GRN-29 localizer course transmitter 90/150 Hz percent-of-modulation | Align AN/FRN-45 transponder | Identify parts using illustrated p | Measure AN/GRN-29 glideslope course transmitter percent-of-modulation | Measure AN/GRN-29 localizer clearance transmitter 90/150 Hz percent-of-modulation | ĭ     |       | ·     |         |       | Measure radiation patterns |       | Trace circuits or signals using block or circuit diagrams |
| TASKS   | F0223<br>N0927   | N0941<br>F0324 | N0933<br>U1227  | N0943                        | N0939  | 111222                      | E0145                              | N0930   | N0936   | U1225 | N0931 | U1223 | F0224   | F0322 | F0326                      | N0938 | F0466   |

Mean TE Rating is 1.73, and Standard Deviation is 1.48 (High TE = 3.21) Average TD Rating is 5.00  $\,$ 

TABLE 20

# TASKS RATED HIGHEST IN TASK DIFFICULTY

|       |   |      | PERCEI  | PERCENT MEMBERS PERFORMING | RS PERFOR      | RMING          |      |
|-------|---|------|---------|----------------------------|----------------|----------------|------|
| TACVO |   | TASK | 1ST JOB | 1ST ENL                    | 5-SKL<br>LEVEL | 7-SKL<br>LEVEL | TNG  |
| IASNS |   | DIFF | (N=21)  | (N=96)                     | (N=320)        | (N=133)        | EMP  |
| K0700 | Install or remove VOR or terminal VOR (TVOR) systems                          | 8.36 | 0       | т                          | 2              | <del></del>    | .74  |
| K0699 | Install or remove VHF omnirange (VOR) and TACAN (VORTAC) systems              | 8.33 | 0       | 9                          | æ              | 5              | .79  |
| F0239 | Construct or design circuitry   | 8.17 | 0       | 2                          | 2              | <b>∞</b>       | .28  |
| K0693 | Install or remove SSILs localizer systems                                     | 8.06 | 0       | 7                          | 9              | ς.             | .72  |
| K0692 | Install or remove SSILs glideslope systems                                    | 8.02 | 0       | 2                          | 9              | 2              | .70  |
| D0111 | Develop career development course (CDC) curriculum materials                  | 7.78 | 0       | 7                          | e              | 9              | 00.  |
| P1023 | Isolate AN/FRN-44 antenna system malfunctions                                 | 7.76 | 14      | 13                         | 13             | 10             | 3.23 |
| A0022 | Plan installation of new equipment  | 7.74 | 0       | 9                          | 19             | 35             | .53  |
| A0011 | Establish host-tenant support agreements                                      | 7.70 | 0       | 7                          | <b>∞</b>       | 20             | .15  |
| P1001 | Align VOR antennas  | 7.52 | 2       | <b>∞</b>                   | <b>∞</b>       | ∞              | 2.43 |
| U1222 | Align AN/FRN-45 transponder 100-watt amplitude shaper controller assemblies   | 7.48 | 38      | 99                         | 51             | 33             | 5.60 |
| K0667 | Install or remove AN/FRN-45 tactical navigation (TACAN) systems               | 7.38 | 0       | 6                          | 6              | <b>∞</b>       | 68:  |
| P0968 | Adjust antenna RF phasing   | 7.35 | 29      | 17                         | 14             | 11             | 3.26 |
| A0006 | Develop new equipment test plans  | 7.33 | 0       | ന                          | 6              | 20             | 90:  |
| P1025 | Isolate malfunctions in VOR antenna systems                                   | 7.31 | 14      | 1                          | 12             | ∞              | 2.96 |
| M0790 | Adjust AN/GRN-27 localizer recombination circuits                             | 7.30 | 0       | 0                          | 0              | 7              | 89.  |
| 9600D | Write EPRs  | 7.28 | 0       | 7                          | 40             | 63             | 1.26 |
| M0795 | Align AN/GRN-27 glideslope antenna systems                                    | 7.25 | 0       | 0                          | 0              | 7              | .43  |
| F0234 | Compute phase lags  | 7.22 | 19      | 25                         | 22             | 19             | 2.91 |
| K0703 | Perform commissioning flight inspections                                      | 7.20 | 2       | <b>∞</b>                   | 13             | 15             | 1.68 |
| F0233 | Compute instrument landing system (ILS) antenna glideslope heights or offsets | 7.17 | 29      | 28                         | 18             | 23             | 2.47 |
| M0835 | Isolate malfunctions in AN/GRN-27 glideslope units or major subassemblies     | 7.16 | 0       |                            | <del>,</del>   | 2              | .87  |

\* Average TD Rating is 5.00

### Specialty Training Standard (STS)

A comprehensive review of STS 2E1X2, dated 1 April 1995, compared STS items to survey data (based on the previously mentioned assistance from SMEs in matching JI tasks to STS elements). STS paragraphs containing general knowledge information, mandatory entries, subject-matter-knowledge-only requirements, or basic supervisory responsibilities were not examined. Task knowledge and performance elements of the STS were compared against the standard set forth in AETCR 52-22 and AFI 36-2623 (i.e., include tasks performed or knowledge required by 20 percent or more of the personnel in a skill level (criterion group) of the AFS).

Overall, the STS provides very comprehensive coverage of the work performed by personnel in this career ladder, with survey data supporting practically all of the essential paragraphs or subparagraphs. Even though some elements did not have high percentages of personnel performing matched tasks, the fact that the supporting tasks were a part of an identifiable job being performed in the career ladder supports the retention of the STS element involving those tasks.

Only two elements of the STS were not supported by occupational survey data and do require a review by training personnel and SMEs. Both involve flight inspections. Table 21 displays these elements with survey data related to tasks matched to them. These STS elements should be carefully considered regarding whether retention in the STS is warranted.

Tasks not matched to any element of the STS are listed at the end of the STS computer listing. These were reviewed to determine if there were any tasks concentrated around any particular functions or jobs. The few tasks that require review pertain to special mission activities. Those technical tasks performed by 20 percent or more respondents of the STS target groups, but which were not referenced to any STS element, are displayed in Table 22. Training personnel and SMEs should consider these unreferenced tasks to determine if inclusion in the STS is justified.

## Plan of Instruction (POI)

Based on the assistance from the technical school SMEs in matching inventory tasks to the E3AB2E132000 POI, dated 26 July 1995, a computer product was generated displaying the results of the matching process. Information furnished for consideration includes percent members performing data for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel, as well as TE and TD ratings for individual tasks.

POI units of instruction and criterion objectives were evaluated using previously discussed standards in AETCR 52-22. Table 23 illustrates performance objectives which are not well supported and should be considered for deletion or replacement with objectives involving tasks performed by higher percentages of incumbents and rated higher in training emphasis and task difficulty. In addition, Table 24 lists tasks which are not matched with POI objectives. These unreferenced tasks should be carefully reviewed to identify tasks which may warrant formal training and should be included in future POIs.

TABLE 21

| STS ITEM  13.1 Perform a  System  V1232 Bi V1239 Or | System  V1232 Brief ground personnel on mission requirements  V1239 Operate NAVAIDS flight inspection system (NAFIS) | PE 1ST 1OB (N=21) | RCENT MEMBE PERFORMING 1ST DAFS ENL 2E155 (N=96) (N=32) 2 13 2 13 13 9 | PERCENT MEMBERS PERFORMING 1ST DAFSC ENL 2E152 ) (N=96) (N=320)  2 13 | DAFSC<br>2E172<br>(N=133) | TNG<br>EMP | TSK<br>DIFF<br>5.43<br>5.64 |
|---|--|-------------------|--|---|---------------------------|------------|-----------------------------|
| V1243 Pa  | V1243 Perform operational checks of flight inspection support  | 0                 | 2  | ∞   | <b>∞</b>                  | 1.06       | 4.93                        |

| 13.3 Describe the AN/FRN-45 flight inspection procedures      |   |    | i i<br>I I<br>I I<br>I I |          |      |      |
|---|---|----|--------------------------|----------|------|------|
| V1232 Brief ground personnel on mission requirements          | 5 | 13 | 6                        | 9        |      | S    |
| V1239 Operate NAVAIDS flight inspection system (NAFIS)        | 5 | 13 | 6                        | 9        | 86.  | 5.64 |
| ground support equipment                                      |   |    |                          |          |      |      |
| V1243 Perform operational checks of flight inspection support | 0 | 5  | <b>∞</b>                 | <b>∞</b> | 1.06 | 4.93 |
| equipment   |   |    |                          |          |      |      |

equipment

TABLE 22

# EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE GROUP MEMBERS AND NOT REFERENCED TO THE STS

| Analyze circuit waveforms  Analyze radiation patterns Analyze system circuit operations Analyze system block diagram functional operations Analyze system block diagram functional operations Analyze system block diagram functional operations Analyze system circuit operations Analyze system circuit operations Evaluate equipment parameters, such as meter readings  Evaluate equipment parameters, such as meter readings Interpret plans, diagrams, or schematics Isolate malfunctions in power supplies Berform operational checks of transmitter Record flight-check readings Track circuits or signals using block or circuit diagrams Frecorders F |       |   | PERCEN     | T MEMBI    | PERCENT MEMBERS PERFORMING | RMING          |      |      |
|--|-------|---|------------|------------|----------------------------|----------------|------|------|
| Analyze circuit waveforms  Analyze radiation patterns  Analyze system block diagram functional operations  Analyze system obtain operations  Evaluate equipment parameters, such as meter readings  Inspect transmitters  Inspect transmitters  Inspect analymotions in transmitters  Necord flight-checks of power supplies  Perform operational checks of transmitter  Record flight-check readings  Perform operational checks of transmitter  Record flight-check readings  Track circuits or signals using block or circuit diagrams  Record flight-check readings  Track circuits or signals using block or circuit diagrams  Perform operational checks of GMQ-32 transmissometer sets  Perform operational checks of GMQ-32 transmissometer sets  Inspect AN/GRN-29 localizer antenna systems  Perform operational checks of GMQ-32 transmissometer sets  Inspect AN/GRN-29 localizer antenna systems  Analyze systems  Analyze system of the systems  Analyze system of the systems  Analyze systems  Analyze system of the systems  Analyze system of the systems  Analyze system obtains the systems  Analyze system obtains obtained the systems  Analyze system obtained by the system of the system of the system of the system obtained by the system of the system of the system obtained by the system of the system obtained by the system of the system of the system of the system o |       |   | 1ST<br>JOB | 1ST<br>ENL | DAFSC<br>2E152             | DAFSC<br>2E172 | TNG  | TSK  |
| Analyze circuit waveforms         57         58         56         40         4.68           Analyze indications of built-in tests (BITS)         62         67         55         38         5.04           Analyze radiation patterns         76         73         68         46         6.11           Analyze system circuit operations         71         70         63         44         5.21           Inspect transmitters         71         70         63         44         5.21           Inspect transmitters         43         56         61         41         5.49           Inspect transmitters         43         59         63         44         5.21           Inspect transmitters         43         59         65         61         45         5.32           Inspect malfunctions in transmitter         43         59         55         41         5.04           Measure radiation patterns         67         59         52         56         41         5.04           Measure radiation patterns         67         59         52         38         5.47           Measure radiation achecks of power supplies         71         72         67         48         5.1   | SZ    |   | (N=21)     | (96=N)     | (N=320)                    | (N=133)        | EMP  | DIF  |
| Analyze indications of built-in tests (BITS)         62         67         55         38         5.04           Analyze radiation patterns         Analyze radiation patterns         76         73         68         46         6.11           Analyze system block diagram functional operations         71         70         63         44         5.02           Analyze system circuit operations         52         59         63         44         5.21           Inspect transmitters         43         56         61         41         3.60           Interpret plans, diagrams, or schematics         43         55         60         46         5.21           Interpret plans, diagrams, or schematics         43         55         60         46         5.32           Inspect malfunctions in power supplies         71         72         67         47         4.51           Inspect malfunctions in power supplies         71         72         67         48         5.09           Measure radiation patterns         67         59         52         38         5.47           Perform operational checks of transmitter         71         72         67         42         4.72           Record flight-check readings         71   | Q     | Analyze circuit waveforms                                 | 57         | 28         | 56                         | 40             | 4.68 | 6.22 |
| Analyze radiation patterns         57         61         55         41         5.02           Analyze system block diagram functional operations         76         73         68         46         6.11           Analyze system block diagram functional operations         71         70         63         44         5.49           Analyze system circuit operations         52         59         63         44         5.41           Inspect transmitters         43         56         61         41         3.60           Inspect transmitters         43         55         60         46         5.21           Inspect malfunctions in transmitters         38         52         56         41         5.04           Measure radiation patterns         67         59         52         38         5.47           Perform operational checks of power supplies         71         72         67         44         5.14           Record flight-check readings         71         72         66         63         47         5.43           Record flight-check readings         78         54         66         63         47         5.43           Isolate malfunctions in GMQ-32 transmissometer sets         76         65 </td <td></td> <td>Analyze indications of built-in tests (BITS)</td> <td>62</td> <td><i>L</i>9</td> <td>55</td> <td>38</td> <td>5.04</td> <td>5.37</td>   |       | Analyze indications of built-in tests (BITS)              | 62         | <i>L</i> 9 | 55                         | 38             | 5.04 | 5.37 |
| Analyze system block diagram functional operations         76         73         68         46         6.11           Analyze system circuit operations         Analyze system circuit operations         71         70         63         44         5.49           Evaluate equipment parameters, such as meter readings         52         59         63         44         5.21           Inspect transmitters         43         56         61         41         3.60           Interpret plans, diagrams, or schematics         43         59         55         47         4.51           Interpret plans, diagrams, or schematics         43         55         60         46         5.32           Isolate malfunctions in power supplies         71         72         67         48         5.44           Measure radiation patterns         71         72         67         48         5.09           Perform operational checks of power supplies         71         72         67         48         5.43           Record flight-check readings         78         54         61         47         5.43           Record flight-check readings         76         66         63         47         5.43           Isolate malfunctions in GMQ-32 projectors,   | 2     |   | 57         | 61         | 55                         | 41             | 5.02 | 7.08 |
| Analyze system circuit operations         71         70         63         44         5.49           Evaluate equipment parameters, such as meter readings         52         59         63         44         5.21           Inspect transmitters         43         56         61         41         3.60           Interpret plans, diagrams, or schematics         43         55         60         46         5.32           Isolate malfunctions in power supplies         38         52         56         41         5.04           Measure radiation patterns         67         59         52         38         5.47           Measure radiation patterns         71         72         67         48         5.09           Perform operational checks of transmitter         57         66         63         47         5.43           Record flight-check readings         71         72         67         48         5.45           Record flight-check readings         78         54         5.43         4.43           Isolate malfunctions in GMQ-32 projectors, receivers, or         38         54         54         4.43           recorders         Perform operational checks of GMQ-32 transmissometer sets         76         56         5   | F0223 | Analyze system block diagram functional operations        | 9/         | 73         | 89                         | 46             | 6.11 | 5.63 |
| Evaluate equipment parameters, such as meter readings         52         59         63         44         5.21           Inspect transmitters         43         56         61         41         3.60           Interpret plans, diagrams, or schematics         43         59         55         47         4.51           Isolate malfunctions in power supplies         38         52         56         41         5.04           Measure radiation patterns         67         59         52         38         5.47           Measure radiation patterns         71         72         67         48         5.04           Perform operational checks of power supplies         57         66         63         47         5.43           Perform operational checks of transmitter         57         66         63         47         5.43           Record flight-check readings         61         57         48         5.43         47         5.43           Record flight-check readings         7         66         63         47         5.45           Isolate malfunctions in GMQ-32 projectors, receivers, or receivers, or receivers, or signals using block or circuit diagrams         38         54         56         47         4.43           Perfo  | F0224 | Analyze system circuit operations                         | 71         | 70         | 63                         | 44             | 5.49 | 6.57 |
| Inspect transmitters         43         56         61         41         3.60           Interpret plans, diagrams, or schematics         43         59         55         47         4.51           Isolate malfunctions in power supplies         43         55         60         46         5.32           Isolate malfunctions in transmitters         67         59         52         38         5.04           Measure radiation patterns         71         72         67         41         5.04           Perform operational checks of power supplies         71         72         67         48         5.45           Perform operational checks of transmitter         48         54         61         42         4.72           Record flight-check readings         Track circuits or signals using block or circuit diagrams         48         61         57         38         5.45           Isolate malfunctions in GMQ-32 projectors, receivers, or recorders         76         65         47         24         4.43           Perform operational checks of GMQ-32 transmissometer sets         76         65         49         26         466           Inspect AN/GRN-29 glideslope antenna systems         38         54         56         35         3.81   | F0245 | Evaluate equipment parameters, such as meter readings     | 52         | 59         | 63                         | 44             | 5.21 | 4.98 |
| Interpret plans, diagrams, or schematics         43         55         47         4.51           Isolate malfunctions in power supplies         38         52         60         46         5.32           Isolate malfunctions in transmitters         67         59         52         38         5.47           Measure radiation patterns         67         59         52         38         5.47           Measure radiation patterns         71         72         67         48         5.47           Perform operational checks of power supplies         71         72         67         48         5.47           Perform operational checks of transmitter         48         54         61         47         4.72           Record flight-check readings         Track circuits or signals using block or circuit diagrams         48         61         57         38         5.45           Isolate malfunctions in GMQ-32 projectors, receivers, or recorders         76         65         49         5.45         4.43           Perform operational checks of GMQ-32 transmissometer sets         76         65         49         56         3.65           Inspect AN/GRN-29 glideslope antenna systems         38         54         56         38         3.81   | F0281 | Inspect transmitters                                      | 43         | 99         | . 19                       | 41             | 3.60 | 5.00 |
| Isolate malfunctions in power supplies       43       55       60       46       5.32         Isolate malfunctions in transmitters       38       52       56       41       5.04         Measure radiation patterns       67       59       52       38       5.47         Perform operational checks of power supplies       71       72       67       48       5.49         Perform operational checks of transmitter       57       66       63       47       5.43         Record flight-check readings       7       61       42       4.72         Record flight-check readings       7       61       42       4.72         Track circuits or signals using block or circuit diagrams       38       52       47       24       4.43         Isolate malfunctions in GMQ-32 projectors, receivers, or recorders       76       65       49       26       4.66         Inspect AN/GRN-29 glideslope antenna systems       38       54       56       35       3.81         Inspect AN/GRN-29 localizer antenna systems       48       61       58       36       3.89         Measure AN/GRN-29 glideslope near-field monitor outputs       57       55       50       30       4.83  | F0287 | Interpret plans, diagrams, or schematics                  | 43         | 29         | 55                         | 47             | 4.51 | 90.9 |
| Isolate malfunctions in transmitters       38       52       56       41       5.04         Measure radiation patterns       67       59       52       38       5.47         Perform operational checks of power supplies       71       72       67       48       5.09         Perform operational checks of transmitter       57       66       63       47       5.43         Record flight-check readings       48       54       61       42       4.72         Track circuits or signals using block or circuit diagrams       48       61       57       38       5.45         Isolate malfunctions in GMQ-32 projectors, receivers, or recorders       38       52       47       24       4.43         Inspect AN/GRN-29 glideslope antenna systems       38       54       56       35       3.65         Inspect AN/GRN-29 localizer antenna systems       38       54       56       35       3.89         Inspect AN/GRN-29 glideslope near-field monitor outputs       57       55       50       30       4.83  | 7     | Isolate malfunctions in power supplies                    | 43         | 55         | 09                         | 46             | 5.32 | 5.60 |
| Measure radiation patterns       67       59       52       38       5.47         Perform operational checks of power supplies       71       72       67       48       5.09         Perform operational checks of transmitter       57       66       63       47       5.43         Record flight-check readings       48       54       61       42       4.72         Track circuits or signals using block or circuit diagrams       48       61       57       38       5.45         Isolate malfunctions in GMQ-32 projectors, receivers, or recorders       38       52       47       24       4.43         Perform operational checks of GMQ-32 transmissometer sets       76       65       49       26       4.66         Inspect AN/GRN-29 glideslope antenna systems       38       54       56       35       3.62         Inspect AN/GRN-29 localizer antenna systems       48       61       58       36       3.89         Inspect AN/GRN-29 glideslope near-field monitor outputs       57       55       50       30       4.83   | 4     | Isolate malfunctions in transmitters                      | 38         | 52         | 99                         | 41             | 5.04 | 6.46 |
| Perform operational checks of power supplies Perform operational checks of transmitter Perform operational checks of transmitter Record flight-check readings Track circuits or signals using block or circuit diagrams Track circuits or signals using block or circuit diagrams Track circuits or signals using block or circuit diagrams  Track circuits or signals using block or circuit diagrams  Record flight-check readings Track circuits or signals using block or circuit diagrams  18 61 57 38 5.45  18 61 67 4.72  18 6.43  18 7 66  18 66  18 67  18 67  18 67  18 67  18 67  18 67  18 67  18 67  18 67  18 67  18 67  18 67  18 68  18  | 9     | Measure radiation patterns                                | <i>L</i> 9 | 59         | 52                         | 38             | 5.47 | 5.50 |
| Perform operational checks of transmitter576663475.43Record flight-check readings485461424.72Track circuits or signals using block or circuit diagrams486157385.45Isolate malfunctions in GMQ-32 projectors, receivers, or recorders385247244.43recordersPerform operational checks of GMQ-32 transmissometer sets766549264.66Inspect AN/GRN-29 glideslope antenna systems385456353.62Inspect AN/GRN-29 localizer antenna systems385658363.89Inspect AN/GRN-29 glideslope near-field monitor outputs575550304.83   | 9     | Perform operational checks of power supplies              | 71         | 72         | <i>L</i> 9                 | 48             | 5.09 | 4.18 |
| Record flight-check readings485461424.72Track circuits or signals using block or circuit diagrams486157385.45Isolate malfunctions in GMQ-32 projectors, receivers, or recorders385247244.43recordersPerform operational checks of GMQ-32 transmissometer sets766549264.66Inspect AN/GRN-29 glideslope antenna systems385456353.62Inspect AN/GRN-29 localizer antenna systems385658363.81Inspect AN/GRN-29 glideslope near-field monitor outputs575550304.83  | F0361 | Perform operational checks of transmitter                 | 27         | 99         | 63                         | 47             | 5.43 | 5.48 |
| Track circuits or signals using block or circuit diagrams486157385.45Isolate malfunctions in GMQ-32 projectors, receivers, or recorders385247244.43Perform operational checks of GMQ-32 transmissometer sets766549264.66Inspect AN/GRN-29 glideslope antenna systems385456353.62Inspect AN/GRN-29 localizer antenna systems385658363.81Inspect AN/GRN-29 localizer distribution units486158363.89Measure AN/GRN-29 glideslope near-field monitor outputs575550304.83   | 69    | Record flight-check readings                              | 48         | 54         | 61                         | 42             | 4.72 | 4.59 |
| Isolate malfunctions in GMQ-32 projectors, receivers, or recorders  recorders  Perform operational checks of GMQ-32 transmissometer sets Inspect AN/GRN-29 glideslope antenna systems Inspect AN/GRN-29 localizer antenna systems Inspect AN/GRN-29 localizer distribution units Inspect AN/GRN-29 glideslope near-field monitor outputs  76  65  49  24  4.43  4.66  3.62  Inspect AN/GRN-29 glideslope antenna systems  Inspect AN/GRN-29 glideslope near-field monitor outputs  57  55  65  47  4.43  4.66  4.66  3.61  3.89  Measure AN/GRN-29 glideslope near-field monitor outputs   | 9     | Track circuits or signals using block or circuit diagrams | 48         | 61         | 27                         | 38             | 5.45 | 5.33 |
| recorders Perform operational checks of GMQ-32 transmissometer sets Inspect AN/GRN-29 glideslope antenna systems Inspect AN/GRN-29 localizer antenna systems Inspect AN/GRN-29 localizer distribution units Inspect AN/GRN-29 glideslope near-field monitor outputs  76 65 49 26 4.66 3.81 3.81 3.81 Measure AN/GRN-29 glideslope near-field monitor outputs 57 55 50 30 4.83  | 27    | Isolate malfunctions in GMQ-32 projectors, receivers, or  | 38         | 52         | 47                         | 24             | 4.43 | 5.41 |
| Perform operational checks of GMQ-32 transmissometer sets 76 65 49 26 4.66 Inspect AN/GRN-29 glideslope antenna systems 38 56 58 36 3.81 Inspect AN/GRN-29 localizer antenna systems 48 61 58 36 3.89 Measure AN/GRN-29 glideslope near-field monitor outputs 57 55 50 30 4.83   |       | recorders   |            |            |                            |                |      |      |
| Inspect AN/GRN-29 glideslope antenna systems385456353.62Inspect AN/GRN-29 localizer antenna systems385658363.81Inspect AN/GRN-29 localizer distribution units486158363.89Measure AN/GRN-29 glideslope near-field monitor outputs575550304.83   | H0545 | Perform operational checks of GMQ-32 transmissometer sets | 9/         | 65         | 46                         | 56             | 4.66 | 4.43 |
| Inspect AN/GRN-29 localizer antenna systems385658363.81Inspect AN/GRN-29 localizer distribution units486158363.89Measure AN/GRN-29 glideslope near-field monitor outputs575550304.83   | N0916 | Inspect AN/GRN-29 glideslope antenna systems              | 38         | 54         | 99                         | 35             | 3.62 | 4.75 |
| Inspect AN/GRN-29 localizer distribution units  Measure AN/GRN-29 glideslope near-field monitor outputs  48 61 58 36 3.89  Measure AN/GRN-29 glideslope near-field monitor outputs   | 61    | Inspect AN/GRN-29 localizer antenna systems               | 38         | 99         | 58                         | 36             | 3.81 | 5.04 |
| Measure AN/GRN-29 glideslope near-field monitor outputs 57 55 50 30 4.83   | 20    | Inspect AN/GRN-29 localizer distribution units            | 48         | 61         | 58                         | 36             | 3.89 | 5.60 |
|  | 22    | Measure AN/GRN-29 glideslope near-field monitor outputs   | 57         | 55         | 50                         | 30             | 4.83 | 4.43 |

TABLE 23

# EXAMPLES OF POI ELEMENTS NOT SUPPORTED BY SURVEY DATA (LESS THAN 30 PERCENT MEMBERS PERFORMING)

|         | TSK  | 4.40  | 4.17   | 3.77  | 5.43   | 5.64  |
|---------|--|---|--|---|--|---|
|         | TNG  | 3.64  | 1.77   | 2.17  | 1.19   | 86:   |
| (DAIII) | AS PERF<br>1ST<br>ENL<br>(N=96)                      | 29  | . 54   | 27  | . 7  | . 13  |
| I EM.OM | PCT MBRS PERF<br>1ST 1ST<br>JOB ENL<br>(N=21) (N=96) | 29  | 19   | 24  | 0  | 'n  |
|         | POI ITEM   | I 2c. Analyze the operation of the IP-1456 CTS: 2.1, 6.7 Meas: W H0516 Configure IP-1456 indicators | I 6c(3). Describe the operation of the AN/TMQ-36 CTS: 2.1, 8.2.3 Meas: W I0569 Operate TMQ-36 remote display units | I 6c(4). Using T.O. 31m5-2TMQ36-1, perform the set-up and tear down of the AN/TMQ-36  10573 Perform TMQ-36 self-test procedures | I 5a. Identify the requirements for an ILS flight check CTS: 13.1 Meas: W V1232 Brief ground personnel on mission requirements | I 5b. Using KCS 3214-9 and flight check IVD, perform a simulated flight inspection of the ILS. CTS: 13.1 Meas: PC V1239 Operate NAVAIDS flight inspection system (NAFIS) ground support equipment |

TABLE 24

# EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE GROUP MEMBERS AND NOT REFERENCED TO THE POI

|          |  | PERCENT MEMBERS PERFORMING | AEMBERS<br>UMING |      |      |
|----------|--|----------------------------|------------------|------|------|
|          |  | 1ST<br>JOB                 | 1ST<br>ENL       | ING  | TSK  |
| POI ITEM | M  | (N=21)                     | (96=N)           | EMP  | DIFF |
| F0220    | Analyze circuit waveforms  | 57                         | 58               | 4 68 | 629  |
| F0221    | Analyze indications of built-in-tests (BITS)                       | 62                         | 929              | 5.04 | 5.37 |
| F0222    | Analyze radiation patterns   | 57                         | 61               | 5.02 | 7.08 |
| F0223    | Analyze system block diagram functional operations                 | 92                         | 73               | 6.11 | 5.63 |
| F0224    | Analyze system circuit operations                                  | 71                         | 70               | 5.49 | 6.57 |
| F0245    | Evaluate equipment parameters, such as meter readings              | 52                         | 59               | 5.21 | 4.98 |
| F0281    | Inspect transmitters   | 43                         | 99               | 3.60 | 5.00 |
| F0287    | Interpret plans, diagrams, or schematics                           | . 43                       | 59               | 4.51 | 90.9 |
| F0307    |  | . 43                       | 55               | 5.32 | 5.60 |
| F0314    | Isolate malfunctions in transmitters                               | 38                         | 52               | 5.04 | 6.46 |
| F0326    | Measure radiation patterns   | 29                         | 59               | 5.47 | 5.50 |
| F0356    | Perform operational checks of power supplies                       | 71                         | 72               | 5.09 | 4.18 |
| F0361    | Perform operational checks of transmitters                         | 57                         | 99               | 5.43 | 5.48 |
| F0369    | Record flight-check readings                                       | 48                         | 54               | 4.72 | 4.59 |
| F0466    | Trace circuits or signals using block or circuit diagrams          | 48                         | 61               | 5.45 | 5.33 |
| H0527    | Isolate malfunctions in GMQ-32 projectors, receivers, or recorders | 38                         | 52               | 4.43 | 5.41 |
| H0545    | Perform operational checks of GMQ-32 transmissometer sets          | 92                         | 65               | 4.66 | 4.43 |
| N0916    | Inspect AN/GRN-29 glideslope antenna systems                       | 38                         | 54               | 3.62 | 4.75 |
| N0919    | Inspect AN/GRN-29 localizer antenna systems                        | 38                         | 26               | 3.81 | 5.04 |
| N0920    | Inspect AN/GRN-29 localizer distribution units                     | 48                         | . 61             | 3.89 | 5.60 |

### JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction.

Table 25 presents job satisfaction data for AFSC 2E1X2 TAFMS groups, together with TAFMS data for a comparative sample of Logistics career ladders surveyed in 1994. The majority of the survey sample express positive feelings toward their jobs. The intentions to reenlist for the 2E1X2 career ladder, however, is a bit lower than the comparative sample.

An indication of how job satisfaction perceptions have changed over time is provided in Table 26, where again TAFMS data for 1995 survey respondents are presented, along with data from respondents to the last OSR involving this career ladder in 1989 (AFSCs 304X1 and 302X0 combined). Reviewing this table, it is evident the merger of AFSCs 304X1 and 302X0 into 2E1X2 in October 1990, did have an impact across TAFMS groups relating to job satisfaction. It is apparent more so in the review of the individuals in their first and second enlistment. These incumbents express lower job interest, feel their talents are being used less, and their training is not being used effectively.

In Table 27, review of the job satisfaction data for personnel in the specialty jobs identified in this survey reveals that airmen responded very positively to all the indicators listed. However, looking at the Mobility job, airmen assigned to combat communication units are by far less satisfied with their job, stating the job is dull and does not utilize their talents or training. Their reenlistment intentions are the lowest of all eight specialty jobs.

When there are serious problems in a career ladder, survey respondents are usually quite free with write-in comments to complain about perceived problems in the field. Twenty-six percent of this survey sample used the write-in feature to convey some type of information, yet only 3 percent of the comments received (representing 1 percent of the total sample) could be characterized as complaints about the Mobility specialty job. Otherwise, no particular trends were noted among the comments received.

TABLE 25

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS (PERCENT MEMBERS RESPONDING)

|  | 1-48 M | 1-48 MOS TAFMS | 49-96 N  | 49-96 MOS TAFMS | 97+ MC   | 97+ MOS TAFMS |
|--|--------|----------------|----------|-----------------|----------|---------------|
|  | 1995   | COMP           | 1995     | COMP            | 1995     | COMP          |
|  | 2E1X2  | SAMPLE*        | 2E1X2    | SAMPLE*         | 2E1X2    | SAMPLE*       |
|  | (96=N) | (N=11,582)     | (N=157)  | (N=11,582)      | (N=298)  | (N=11,582)    |
| EXPRESSED JOB INTEREST: INTERESTING SO-SO DULL   | 70     | 63             | 72       | 61              | 77       | 69            |
|  | 13     | 23             | 19       | 26              | 13       | 22            |
|  | 17     | 13             | 9        | 12              | 10       | 9             |
| PERCEIVED UTILIZATION OF TALENTS:<br>FAIRLY WELL TO PERFECTLY<br>LITTLE OR NOT AT ALL  | 77     | 68<br>32       | 78<br>22 | 70<br>30        | 83       | 79<br>21      |
| PERCEIVED UTILIZATION OF TRAINING:<br>FAIRLY WELL TO PERFECTLY<br>LITTLE OR NOT AT ALL | 79     | . 89           | 75<br>25 | 76<br>24        | 75<br>25 | 82<br>18      |
| SENSE OF ACCOMPLISHMENT GAINED FROM WORK: SATISFIED NEUTRAL DISSATISFIED               | 65     | 68             | 69       | 68              | 71       | 73            |
|  | 10     | 17             | 10       | 15              | 9        | 11            |
|  | 24     | 15             | 21       | 16              | 20       | 151           |
| REENLISTMENT INTENTIONS: YES, OR PROBABLY YES NO, OR PROBABLY NO PLAN TO RETIRE        | 56     | 65             | 72       | 80              | 70       | 76            |
|  | 44     | 34             | 28       | 19              | 9        | 6             |
|  | 0      | 0              | 0        | 0               | 21       | 18            |

Comparative sample of Logistics career ladders surveyed in 1994 (includes AFSC 2A5X2, Helicopter Maintenance, AFSC 2A6X4, Aircraft Fuel Systems, AFSC 2A7X2, Nondestructive Inspection, AFSC 2A7X4, Fabrication and Parachute, AFSC 2E3X1, Secure Communications System, AFSC 2FOX1, Fuels, AFSC 2W1X1, Aircraft Armament Systems.

COMPARISON OF CURRENT SURVEY AND 1989 TAFMS GROUPS (PERCENT MEMBERS RESPONDING) TABLE 26

|   | 1-4                     | 1-48 MOS TAFMS           | MS                       | 49-5                     | 49-96 MOS TAFMS          | FMS                      | -26                      | 97+ MOS TAFMS            | MS                       |
|---|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| JOB SATISFACTION INFORMATION:                             | 1995<br>2E1X2<br>(N=96) | 1989<br>302X0<br>(N=167) | 1989<br>304X1<br>(N=270) | 1995<br>2E1X2<br>(N=157) | 1989<br>302X0<br>(N=122) | 1989<br>304X1<br>(N=147) | 1995<br>2E1X2<br>(N=298) | 1989<br>302X0<br>(N=155) | 1989<br>304X1<br>(N=271) |
| EVBBERGED IOD NATEBERT.                                   |                         |                          |                          |                          |                          |                          |                          |                          |                          |
| EAFTRESSEL JUB INTEREST:                                  |                         |                          |                          |                          |                          |                          |                          |                          |                          |
| INTERESTING SO-SO DULL                                    | 70<br>13<br>17          | 78<br>15<br>7            | 79<br>11<br>01           | 72<br>19<br>9            | 76<br>15<br>9            | 84<br>10<br>6            | 77<br>13<br>10           | 73<br>17<br>10           | 75<br>14<br>11           |
| PERCEIVED UTILIZATION OF TALENTS:                         |                         |                          |                          |                          |                          |                          |                          |                          |                          |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL             | 77 23                   | 90                       | 84<br>16                 | 78                       | 82<br>18                 | 88                       | 83                       | 80                       | 83<br>17                 |
| PERCEIVED UTILIZATION OF TRAINING:                        |                         |                          |                          |                          |                          |                          |                          |                          |                          |
| FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL             | 79<br>21                | 90 01                    | 86<br>14                 | 75<br>25                 | 85                       | 86<br>14                 | 75                       | 81                       | 76<br>24                 |
| SENSE OF ACCOMPLISHMENT FROM WORK:                        |                         |                          |                          |                          |                          |                          |                          |                          |                          |
| SATISFIED NEUTRAL DISSATISFIED                            | 65<br>10<br>24          | 79<br>10<br>11           | 72<br>13<br>15           | 69<br>10<br>21           | 70 12 18                 | 78<br>10<br>12           | 71<br>9<br>20            | 67<br>10<br>23           | 65<br>13<br>22           |
| REENLISTMENT INTENTIONS:                                  |                         |                          |                          |                          |                          |                          |                          |                          |                          |
| YES, OR PROBABLY YES<br>NO, OR PROBABLY NO<br>WILL RETIRE | 56<br>40<br>0           | 62<br>37<br>1            | 54<br>46<br>0            | 72<br>28<br>0            | 70<br>27<br>3            | 70<br>29<br>1            | 70<br>9<br>19            | 65<br>13<br>22           | 76 13                    |

TABLE 27

COMPARISONS OF 10B SATISFACTION INDICATORS BY SPECIAL TY TOBS

| COMPARISONS OF JOB SATISFACTION INDICATORS BY SPECIALTY JOBS (PERCENT MEMBERS RESPONDING) | JOB SATISFACTION INDICATORS BY<br>(PERCENT MEMBERS RESPONDING) | TON INDICAT<br>BERS RESPOR     | 'ORS BY SPEC<br>4DING) .    | SIALTY JOBS                |  |
|---|--|--------------------------------|-----------------------------|----------------------------|--|
|   | MET/NAV<br>REPAIRMAN<br>(ST0038)<br>(N=349)                    | MOBILITY<br>(ST0069)<br>(N=35) | E & I<br>(ST0097)<br>(N=08) | SESS<br>(ST0046)<br>(N=06) | QUALITY<br>CONTROL<br>(ST0082)<br>(N=23) |
| EXPRESSED JOB INTEREST:   |  |                                |                             |                            |  |
| INTERESTING<br>SO-SO<br>DULL  | 79<br>13   | 34<br>40                       | 88<br>12<br>0               | 000                        | 74<br>22<br>4                            |
| PERCEIVED UTILIZATION OF TALENTS:   |  |                                |                             |                            |  |
| FAIRLY WELL TO PERFECTLY<br>LITTLE OR NOT AT ALL  | 86<br>14   | 43                             | 88<br>13                    | 100                        | 83<br>17                                 |
| PERCEIVED UTILIZATION OF TRAINING:  |  |                                |                             |                            |  |
| FAIRLY WELL TO PERFECTLY<br>LITTLE OR NOT AT ALL  | 88<br>12   | 34<br>66                       | 88<br>12                    | 100                        | 74<br>26                                 |
| SENSE OF ACCOMPLISHMENT GAINED FROM WORK:   |  |                                |                             |                            |  |
| SATISFIED<br>NEUTRAL<br>DISSATISFIED  | 75<br>8<br>17  | 43<br>11<br>46                 | 100                         | 67<br>17<br>17             | 61<br>9<br>30                            |
| REENLISTMENT INTENTIONS:  |  |                                |                             |                            |  |
| YES, OR PROBABLY YES<br>NO, OR PROBABLY NO<br>WILL RETIRE                                 | 72<br>20<br>7  | 60<br>29<br>9                  | 75<br>0<br>25               | 67<br>17<br>17             | 70<br>13<br>17                           |

TABLE 27 (CONTINUED)

COMPARISONS OF JOB SATISFACTION INDICATORS BY SPECIALTY JOBS (PERCENT MEMBERS RESPONDING)

|  | (I ENCERNI MEMBERS NESFONDING)                 |   |  |
|--|--|---|--|
|  | WORKCENTER<br>SUPERVISOR<br>(ST0086)<br>(N=18) | WORKCENTER<br>MANAGER<br>(ST0104)<br>(N=11) | FUNCTIONAL<br>MANAGER<br>(ST0076)<br>(N=5) |
| EXPRESSED JOB INTEREST:                                      |  |   |  |
| INTERESTING<br>SO-SO<br>DULL                                 | 72<br>11<br>17                                 | 91<br>9<br>0                                | 100<br>0<br>0                              |
| PERCEIVED UTILIZATION OF TALENTS:                            |  |   |  |
| FAIRLY WELL TO PERFECTLY<br>LITTLE OR NOT AT ALL             | 78<br>22                                       | 100   | 100  |
| PERCEIVED UTILIZATION OF TRAINING:                           |  |   |  |
| FAIRLY WELL TO PERFECTLY<br>LITTLE OR NOT AT ALL             | 67<br>33                                       | 36<br>64                                    | 60   |
| SENSE OF ACCOMPLISHMENT GAINED FROM WORK:                    |  |   |  |
| SATISFIED NEUTRAL DISSATISFIED                               | 67   | 91<br>9<br>0                                | 80<br>20<br>0                              |
| REENLISTMENT INTENTIONS:                                     |  |   |  |
| YES, OR PROBABLY YES<br>NO, OR PROBABLY NO<br>PLAN TO RETIRE | 61<br>6<br>33                                  | 36<br>9<br>55                               | 100<br>0<br>0                              |

### **IMPLICATIONS**

This survey was initiated to provide current job and task data for use in evaluating the AFMAN 36-2108 Specialty Description and appropriate training documents

Survey results clearly indicate that the present classification structure, as described in the latest specialty description, accurately portrays the jobs performed in this career ladder. Career ladder training documents appear, on the whole, to be well supported by survey data. As was pointed out in the **JOB SATISFACTION ANALYSIS** section, responses by sample personnel pertaining to utilization of training were adequate, thus indicating support for the overall training system.

# APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY SPECIALTY JOB GROUPS

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# METEOROLOGICAL AND NAVIGATION REPAIRMAN (STG0038)

|       |  | PERCENT        |
|-------|--|----------------|
|       |  | <b>MEMBERS</b> |
| REPRE | SENTATIVE TASKS  | PERFORMING     |
| F0265 | Inspect equipment for corrosion  | . 97           |
| F0379 | Remove or replace bulbs  | 92             |
| F0324 | Measure DC voltages  | 90             |
| F0334 | Perform corrosion control procedures   | 89             |
| N0935 | Measure AN/GRN-29 localizer clearance transmitter power outputs                  | 87             |
| N0936 | Measure AN/GRN-29 localizer clearance transmitter 90/150Hz percent-of-modulation | 87             |
| E0145 | Identify parts using illustrated parts breakdowns (IPBs)                         | 86             |
| N0931 | Measure AN/GRN-29 glideslope course transmitter power outputs                    | 86             |
| N0930 | Measure AN/GRN-29 glideslope course transmitter percent-of-modulation            | 86             |
| F0223 | Analyze system block diagram functional operations                               | 86             |
| N0939 | Measure AN/GRN-29 localizer course transmitter 90/150 Hz percent-of-modulation   | <b>86</b>      |
| N0938 | Measure AN/GRN-29 localizer course transmitter power outputs                     | 85             |
| N0948 | Perform AN/GRN-29 turn on-off procedures and check for normal indications        | 85             |
| F0264 | Inspect equipment components   | 85             |
| N0937 | Measure AN/GRN-29 localizer course transmitter ID percent-of-modulation          | 85             |
| U1229 | Perform PMIs of AN/FRN-45 TACAN systems  | 84             |
| H0512 | Complete CT-12K performance tests  | 84             |
| N0941 | Operate portable ILS receivers   | 83             |
| F0230 | Communicate over radio during operational tests                                  | 83             |
| U1228 | Perform AN/FRN-45 turn on-off procedures and check for normal indications        | 83             |
| H0501 | Align FMQ-8 sensor bias  | 82             |
| H0514 | Complete FMQ-8 performance tests   | 82             |
| H0500 | Align FMQ-8 dewpoint and ambient air temperature mechanisms                      | 82             |
| H0515 | Complete IP-1456 performance tests   | 82             |
| H0523 | Isolate malfunctions in FMQ-8 systems  | 81             |
| F0366 | Perform radiation pattern ground checks  | 80             |
| U1227 | Operate AN/FRN-45 input/output terminals   | 80             |
| H0542 | Perform operational checks of FMQ-8 temperature-dew point measuring sets         | 80             |
| F0370 | Record radiation pattern ground check readings                                   | 80             |
| F0365 | Perform preventive maintenance inspections (PMIs) on bail-out systems            | 77             |
| F0465 | Test bail-out alarm systems  | 77             |
| F0245 | Evaluate equipment parameters, such as meter readings                            | 76             |

# MOBILITY (STG0069)

|        |   | PERCENT           |
|--------|---|-------------------|
|        |   | <b>MEMBERS</b>    |
| REPRES | SENTATIVE TASKS   | <b>PERFORMING</b> |
|        |   |                   |
| W1269  | Perform pallet buildups   | 100               |
| W1247  | Load and unload equipment on aircraft, mobilizers, pallets, or vehicles             | 100               |
| W1255  | Set up or tear down tents   | 100               |
| W1246  | Install or remove camouflage netting  | 100               |
| W1253  | Set up or tear down site lighting fixtures  | 100               |
| S1166  | Adjust AN/TRN-26 antenna positioning  | 100               |
| S1184  | Measure AN/TRN-26 unit 5/9 monitor signals  | 100               |
| S1188  | Remove or replace AN/TRN-26 system units or subassemblies                           | 100               |
| F0330  | Pack or unpack tactical equipment   | 97                |
| W1250  | Perform turn on-off procedures for generators and check for normal                  | 97                |
|        | indications   | 07                |
| S1185  | Operate AN/TRN-26 remote indicators   | 97<br>97          |
| S1174  | Align AN/TRN-26 receiver sections   | 97<br>94          |
| W1254  | Set up or tear down tent heaters  | 94<br>94          |
| S1175  | Align AN/TRN-26 transmitters  | . 94<br>. 94      |
| F0265  | Inspect equipment for corrosion   | 94<br>94          |
| Q1058  | Align AN/GRA-111 or AN/TRN-26 monitor oscillators                                   |                   |
| S1178  | Isolate malfunctions in AN/TRN-26 system units or subassemblies                     | 91                |
| S1176  | Inspect AN/TRN-26 antenna assemblies  | 91                |
| Q1072  | Isolate malfunctions in AN/GRA-111 or AN/TRN-26 system units or major subassemblies | 89                |
| E0148  | Inventory equipment, supplies, or tools   | 89                |
| Q1069  | Inspect AN/GRA-111 or AN/TRN-26 monitor readouts                                    | 86                |
| F0332  | Perform channel or frequency changes  | 86                |
| Q1068  | Change RF monitor channels in AN/GRA-111 or AN/TRN-26 systems                       | 86                |
| F0363  | Perform operator maintenance on vehicles  | 80                |
| K0717  | Set up or tear down mobile TACAN systems  | 77                |
| Q1059  | Align AN/GRA-111 or AN/TRN-26 monitor peak power                                    | 77                |
| C0060  | Conduct pre or post deployment inspections  | 77                |
| K0663  | Erect or tear down cantonment areas   | 66                |

# ENGINEERING AND INSTALLATION (STG0097)

|       |  | PERCENT           |
|-------|--|-------------------|
|       |  | <b>MEMBERS</b>    |
| REPRE | SENTATIVE TASKS  | <u>PERFORMING</u> |
| E0140 | Inventory againment supplies or tools                            | 100               |
| E0148 | Inventory equipment, supplies, or tools                          | 100               |
| F0320 | Measure AC voltages  | 100               |
| F0324 | Measure DC voltages  | 100               |
| K0704 | Perform installation inspections                                 | 100               |
| K0666 | Inspect equipment during preinstallation phase                   | 100               |
| K0706 | Perform predeployment processing                                 | 100               |
| K0707 | Perform predeployment vehicle inspections                        |                   |
| K0705 | Perform postdeployment procedures                                | 100               |
| F0317 | Lace or tie-wrap wiring assemblies                               | 88                |
| K0685 | Install or remove lighting protection                            | 88                |
| K0665 | Inspect equipment during post installation phase                 | 88                |
| K0670 | Install or remove electrical grounding systems                   | 88                |
| F0334 | Perform corrosion control procedures                             | 88                |
| K0661 | Conduct postinstallation tests                                   | 88                |
| F0318 | Maintain tool kits   | 88                |
| F0265 | Inspect equipment for corrosion                                  | 88                |
| F0248 | Fabricate conduits   | 88                |
| K0664 | Inspect completion of allied support construction                | 88                |
| K0708 | Perform preinstallation surveys                                  | 88                |
| K0702 | Pack or unpack scheme materials                                  | 88                |
| K0709 | Perform preshakedown tests                                       | 88                |
| K0710 | Perform shakedown tests  | 88                |
| K0713 | Review scheme materials  | 88                |
| K0714 | Review scheme packages prior to installation                     | 88                |
| K0711 | Prepare installation annotated drawings                          | 88                |
| F0287 | Interpret plans, diagrams, or schematics                         | 75                |
| F0249 | Fabricate electrical cables                                      | 75                |
| F0392 | Remove or replace electrical wires                               | 75                |
| K0676 | Install or remove FMQ-13 wind measuring sets                     | 75                |
| F0282 | Install dummy loads  | 75                |
| F0285 | Install mounting brackets or fixtures                            | 63                |
| 10203 | Coordinate installation requirements with appropriate activities | 63                |

# TABLE A4 SOLAR ENVIRONMENTAL SUPPORT SYSTEM (SESS) (STG0065)

|       |   | MEMBERS           |
|-------|---|-------------------|
| REPRE | SENTATIVE TASKS   | <u>PERFORMING</u> |
| E0163 | Maintain TO files   | 100               |
| E0145 | Identify parts using illustrated parts breakdowns (IPBs)                    | 100               |
| F0265 | Inspect equipment for corrosion   | 100               |
| E0158 | Maintain preventive maintenance inspection (PMI) listings                   | 83                |
| E0148 | Inventory equipment, supplies or tools                                      | 83                |
| E0160 | Maintain publication files, other than technical order (TO) files           | 83                |
| J0624 | Perform operational checks of FMQ-7   | 83                |
| E0162 | Maintain test measurement diagnostic equipment (TMDE) calibration schedules | 83                |
| J0627 | Perform operational checks of FMQ-7 TV cameras                              | 83                |
| J0629 | Perform operational checks of FMQ-7 TV manual switchers                     | 83                |
| J0630 | Perform operational checks of FMQ-7 TV monitors                             | 83                |
| F0334 | Perform corrosion control procedures  | 83                |
| F0224 | Analyze system circuit operations   | 83                |
| J0603 | Align FMQ-7 television (TV) system  | 83                |
| J0628 | Perform operational checks of FMQ-7 TV computer controlled switchers        | 83                |
| C0088 | Inspect equipment and facilities  | 67                |
| J0644 | Performance check FMQ-7 TV system synchronization                           | 67                |
| J0639 | Performance check FMQ-7 beam selectors or lens interchange                  | 67                |
| J0645 | Performance check FMQ-7 video brightness analyzers or videometers           | 67                |
| J0616 | Isolate malfunctions in FMQ-7 system units or major subassemblies           | 67                |
| E0153 | Maintain core automated maintenance system (CAMS) workcenter listings       | 67                |
| F0335 | Perform depot-level modifications or maintenance                            | 67                |
| J0643 | Performance check FMQ-7 telescope resolution                                | 67                |
| J0641 | Performance check FMQ-7 camera control assemblies                           | 67                |
| J0638 | Performance check FMQ-7 bar-dot generators and insert keyers                | 67                |
| E0166 | Prepare equipment shipping documents  | 67                |
| E0161 | Maintain supply logs  | 67                |
| J0657 | Service FRR-95 versatec plotters  | 50                |
| J0631 | Perform operational checks of FRR-95 radiometers                            | 50                |

# QUALITY CONTROL (STG0082)

|       |  | PERCENT           |
|-------|--|-------------------|
|       |  | <b>MEMBERS</b>    |
| REPRE | SENTATIVE TASKS  | <b>PERFORMING</b> |
|       |  | 100               |
| C0088 | Inspect equipment or facilities  |                   |
| C0097 | Write inspection reports   | 96<br>06          |
| C0064 | Conduct workcenter quality control inspections   | 96                |
| A0019 | Participate in meetings, such as staff meetings, briefings, conferences or workshops     | 96                |
| C0056 | Conduct acceptance inspections   | 96                |
| B0043 | Implement quality control inspections  | 91                |
| C0078 | Evaluate personnel for compliance with performance or work standards                     | 91                |
| C0063 | Conduct technical inspections  | 91                |
| C0059 | Conduct personnel proficiency evaluations  | 91                |
| A0005 | Develop inspection schedules   | 91                |
| C0055 | Certify status of condemned, reparable, or serviceable parts                             | 87                |
| C0077 | Evaluate performance of meteorological and navigation systems                            | 87                |
| C0058 | Conduct in-progress inspection   | 83                |
| C0062 | Conduct staff assistance visits  | 78                |
| F0265 | Inspect equipment for corrosion  | 74                |
| C0099 | Write special reports, staff studies, or surveys, other than material deficiency reports | 74                |
| C0072 | Evaluate inspection reports or procedures  | 70                |
| F0264 | Inspect equipment components   | 70                |
| F0262 | Inspect electrical grounding systems   | 70                |
| A0008 | Develop self-inspection checklists   | 70                |
| F0263 | Inspect electrical wiring  | 70                |
| C0075 | Evaluate material deficiency reports   | 70                |
| C0098 | Write replies to inspection reports  | <b>6</b> 5        |
| C0084 | Evaluate use of equipment, supplies, or workspace  | 61                |
| E0175 | Prepare TO distribution records  | 57                |
| B0032 | Coordinate inspection and maintenance of equipment with appropriate agencies             | 57                |
| B0045 | Implement self-inspection programs   | 57                |

# WORKCENTER SUPERVISOR (STG0086)

| REPRE | SENTATIVE TASKS   | PERCENT<br>MEMBERS<br>PERFORMING |
|-------|---|----------------------------------|
| A0019 | Participate in meetings, such as staff meetings, briefings, conferences, or workshops | 100                              |
| B0037 | Direct maintenance of equipment or facilities   | 100                              |
| B0034 | Counsel personnel on personal or military-related matters                             | 100                              |
| A0026 | Schedule personnel for temporary duty (TDY) assignments, leaves or passes             | 100                              |
| C0096 | Write EPRs  | 94                               |
| E0180 | Review supply transaction listings or rosters, such as D-04, D-18, or M-30            | 94                               |
| E0149 | Maintain administrative files   | 94                               |
| B0036 | Direct maintenance of administrative files  | 94                               |
| B0032 | Coordinate inspection and maintenance of equipment with appropriate activities        | 94                               |
| C0092 | Review correspondence   | 89                               |
| B0032 | Supervise Meteorological and Navigational Systems Journeymen (AFSC 2E152)             | 89                               |
| E0179 | Review due-in-from maintenance (DIFM) document listings                               | 89                               |
| E0153 | Maintain core automated maintenance systems (CAMS) workcenter listings                | 89                               |
| C0077 | Evaluate performance of meteorological and navigation systems                         | 89                               |
| A0018 | Establish work priorities or schedules  | 89                               |
| D0130 | Plan or schedule OJT  | 89                               |
| D0102 | Assign on-the-job training (OJT) trainers   | 89                               |
| B0028 | Brief personnel on new directives   | 89                               |
| D0129 | Maintaining training records, charts, graphs, or files                                | 83                               |
| C0093 | Review equipment records forms  | 83                               |
| C0098 | Write replies to inspection reports   | 83                               |
| A0012 | Establish performance standards for subordinates                                      | 83                               |
| B0039 | Direct maintenance of work areas  | 83                               |
| D0123 | Evaluate progress of trainees   | 78                               |
| B0051 | Supervise Meteorological and Navigation Systems Apprentices (AFSC 2E132)              | 78                               |
| C0078 | Evaluate personnel for compliance with performance or work standards                  | 78                               |
| C0094 | Review maintenance data files   | 78                               |
| B0029 | Conduct supervisory orientation of newly assigned personnel status boards             | 78                               |
| E0159 | Maintain property custodian authorization/custody receipt listings (CA/CRL)           | 72                               |
| D0100 | Councel trainees on training progress   | 72                               |

# WORKCENTER MANAGER (STG104)

|              |  | PERCENT<br>MEMBERS |
|--------------|--|--------------------|
| <u>REPRE</u> | SENTATIVE TASKS  | PERFORMING         |
| A0019        | Participate in meetings, such as staff meetings, briefings, conferences, or workshops    | 100                |
| C0079        | Evaluate personnel for promotion, demotion, reclassification, or special awards          | 100                |
| B0034        | Counsel personnel on personal or military-related matters                                | 91                 |
| C0071        | Evaluate fund expenditures   | 91                 |
| B0054        | Supervise military personnel with AFSCs other than AFSC 2E1X2                            | · <b>82</b>        |
| C0092        | Review correspondence  | 82                 |
| B0040        | Draft budget requirements  | 82                 |
| C0070        | Evaluate financial requirements  | 82                 |
| C0078        | Evaluate personnel for compliance with performance or work standards                     | 82                 |
| C0096        | Write EPRs   | 82                 |
| B0047        | Interpret directives, policies, or procedures for subordinates                           | · 82               |
| A0003        | Determine requirements for equipment, personnel, space, or supplies                      | 82                 |
| A0012        | Establish performance standards for subordinates   | 82                 |
| A0018        | Establish work priorities or schedules   | 73                 |
| B0029        | Conduct supervisory orientation of newly assigned personnel                              | 73                 |
| B0028        | Brief personnel on new directives  | 73                 |
| D0109        | Counsel trainees on training progress  | 73                 |
| A0027        | Write job or position descriptions   | 73                 |
| A0026        | Schedule personnel for temporary duty (TDY) assignments, leaves, or passes               | 64                 |
| C0084        | Evaluate use of equipment, supplies, or workspace  | 64                 |
| C0073        | Evaluate job or position description   | 64                 |
| A0021        | Plan briefings   | 55                 |
| C0098        | Write replies to inspection reports  | 55                 |
| E0180        | Review supply transaction listings or rosters, such as D-04, D-18, or M-30               | 55                 |
| C0072        | Evaluate inspection reports or procedures  | 55                 |
| C0090        | Write special reports, staff studies, or surveys, other than material deficiency reports | 45                 |
| A0020        | Plan agenda for conferences, staff meetings, symposiums, or workshops                    | 45                 |
| C0087        | Indorse enlisted performance reports (EPRs)  | 45                 |

# FUNCTIONAL MANAGER (STG0076)

|                      |  | PERCENT           |
|----------------------|--|-------------------|
|                      |  | <b>MEMBERS</b>    |
| REPRESENTATIVE TASKS |  | <b>PERFORMING</b> |
| A0019                | Participate in meetings, such as staff meetings, briefings, conferences or workshops               | 100               |
| A0020                | Plan agenda for conferences, staff meetings, symposiums, or workshops                              | 100               |
| A0021                | Plan briefings   | 100               |
| C0098                | Write replies to inspection reports  | 80                |
| C0092                | Review correspondence  | 80                |
| B0040                | Draft budget requirements  | 60                |
| E0181                | Review team trip reports   | 60                |
| C0097                | Write inspection reports   | 40                |
| C0099                | Write special reports, staff studies, or surveys, other than material deficiency reports           | 40                |
| B0028                | Brief personnel on new directives  | 40                |
| E0149                | Maintain administrative files  | 40                |
| A0009                | Draft directives   | 40                |
| D0139                | Select personnel for specialized training  | 40                |
| C0072                | Evaluate inspection reports or procedures  | 40                |
| 30183                | Write team trip reports  | 40                |
| A0003                | Determine requirements for equipment, personnel, space, or supplies                                | 40                |
| C0094                | Review maintenance data files  | 20                |
| B0042                | Implement cost-reduction programs  | 20                |
| A0006                | Develop new equipment test plans   | 20                |
| B0047                | Interpret directives, policies, or procedures for subordinates                                     | 20                |
| C0076                | Evaluate mission impact resulting from inoperative meteorological and navigation systems equipment | 20                |
| C0081                | Evaluate proposed changes to technical publications  | 20                |
| E0182                | Write periodic maintenance summaries   | 20                |
| A0004                | Develop functional or organizational charts  | 20                |
| B0035                | Direct development or maintenance of charts, graphs, or status boards                              | 20                |
| C0067                | Evaluate changes to meteorological and navigation systems  | 20                |
| C0056                | Conduct acceptance inspections   | 20                |